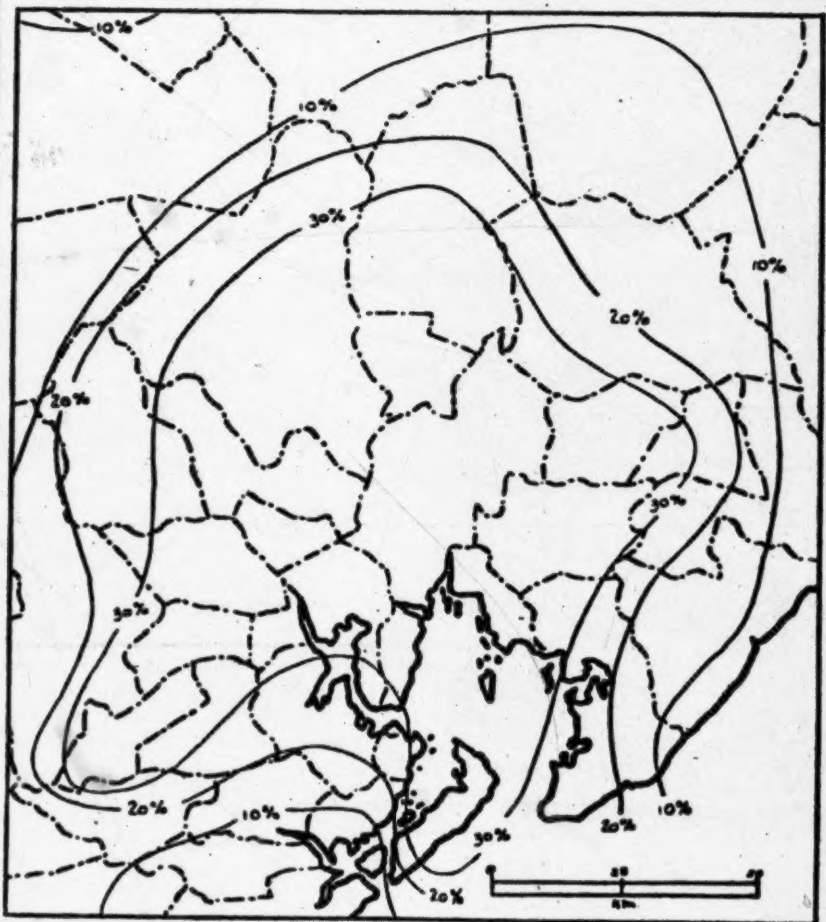
13 [101] Regional Terminology. The term "o recôncavo" can be applied to
any crescentic littoral. In Brazil, however, "the Recôncavo" is almost
universally understood to refer to a semicircle of land bordering the
Baía de Todos os Santos in the state of Bahia. It is no more necessary
to ask which Recôncavo in Brazil than to ask which South in the United
States.

The Recôncavo has a less consistently defined content and boundar
than the United States South. The extent of the area intended is indi-
vidually determined in both common and scholarly usage--usually the limi
of the region is implied rather than delineated. In traditional usage
the Recôncavo generally is equated with the sugar cane area, but at
least as often the area designated includes all the relatively densely
settled and intensively utilized zone around the Baía de Todos os Santos

121 In delimiting the Recôncavo as a preliminary to field and statist
131 cal investigation it seemed desirable to enclose all areas which may
customarily be included in the region. In addition, since the Recôncav
is conceived here primarily as an agricultural region, it seemed most
consistent to include all other contiguous areas of equivalent agri-
cultural utilization. Thus a search was made for a criterion for a
tentative boundary which would circumscribe: (1) the traditional
Recôncavo areas; and (2) the contiguous areas of equal agricultural
intensity; and which in addition would (3) define the limit on a con-
sistent statistical basis. These three requirements would be met with
a boundary determined by the per cent of the land in agricultural use--
a criterion which would summarize the intensity of land-use for
[127] cultivation, fallow, and pasture. Appropriate data were available from
the 1940 census. By inspection it was determined that twenty per cent
[311] of the total area in agricultural use was the value of an isopleth
which would enclose the traditional and equivalent areas and would

TEXT CONTINUED ON PAGE 8 / 1

*102
311
131


10%
10%
30%
10%
20%
20%
30%
20%
30%
20%
10%
30%
20%
20%
10%
0
20
km

RECÔNCAVO OF BAHIA

Per cent of the Total Area in Agricultural Use—1940

Source of data: Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia. Vol. II.

MAP 2

121 131 [311] separate them from the manifestly non-Recôncavo areas of the surrounding zone. This limit of twenty per cent of the total area in agricultural land use corresponded rather closely to the outer boundary of a compact group of twenty-one municípios, and as a tentative regional concept, these twenty-one municípios were considered to be the Recôncavo.[5] The area of the region thus defined is 4,827 square miles (12,500 square kilometers), about equal to the size of the state of Connecticut.

121 241 Purpose and Procedure. The primary purpose of the research upon which this monograph has been based was to analyze, from a geographical point of view, the structure and the functional organization of agriculture within the Recôncavo. It is not within the present scope to make a detailed comparison of the agricultural patterns of the Recôncavo with those of the rest of the nation. However, because of the general unity of the Brazilian agricultural system and the special relationship between the Recôncavo and the origins of the system, a study of the agriculture of the Recôncavo microcosm is a study of many of the basal aspects of Brazilian agriculture.

241 127 Very little literature is presently available on the agricultural patterns of the Recôncavo. Certain general characteristics of the agriculture of the region may be deduced from the brief interpretations of maps of the 1948 production of sugar cane, tobacco, and manioc in the state of Bahia published by the Conselho Nacional de Geografía.[6] Indirect information may be gleaned from the general economic and agricultural histories of Brazil and from the sociological studies of the Brazilian northeast.[7] But comprehensive analysis based upon field or statistical study of the geographical patterns of agriculture of either the state of Bahia or of its nuclear region, the Recôncavo, are lacking.

132 241 droughts and unseasonable heavy rains fall upon valuable, and vulnerable, field crops. Moreover, the cultivators of the Uplands are characteristically small farmers without large financial resources, so that the social repercussions of bad weather in this area may be marked.

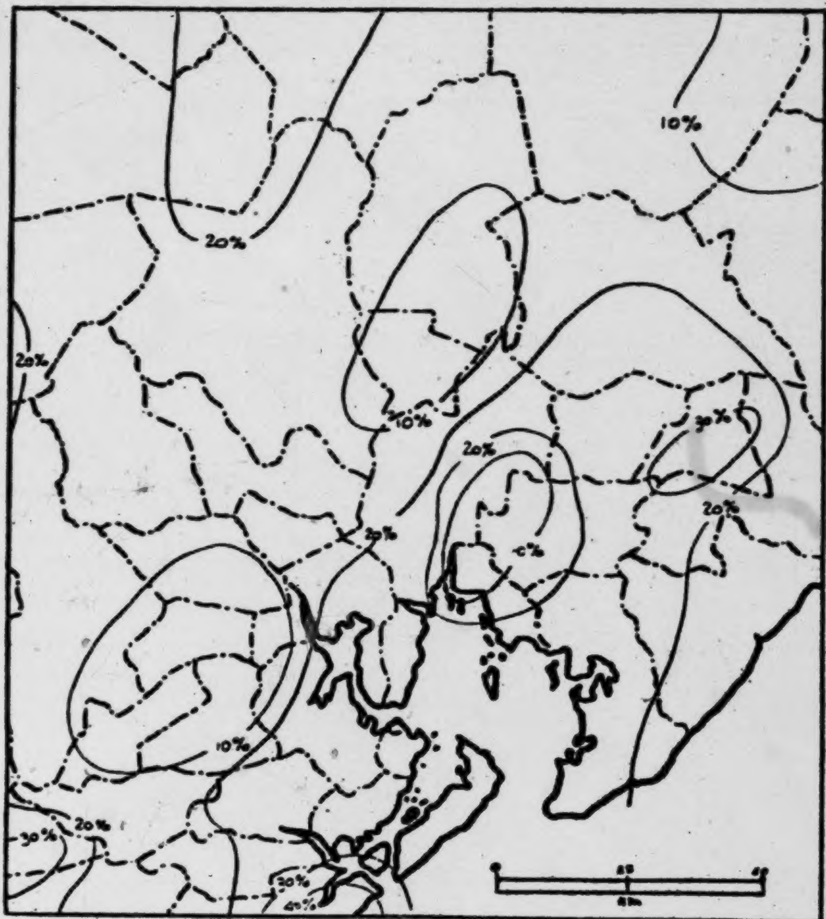
311 137 [241] Wild Vegetation. Wild vegetation is a significant element in the landscape and an important resource for agricultural production in the Recôncavo. In 13 of the 21 municipios of the region, over 10 per cent of the total area, in 1940, was in mata, or forest, which was used as an agricultural resource.[31] In the southwestern third of the Recôncavo as the accompanying map indicates (Map 14), almost one-fifth of the total area was in this "exploited mata." It is inferred, through the addition of "unused and non-productive" land to the "exploited mata," that well over one-half of the total area of the Recôncavo was in wild vegetation.

137 192 In east-central Bahia three terms are used both colloqiually and professionally to designate the wild vegetation: (1) Mata is used generally to refer to the littoral evergreen forest of the Brazilian east coast. (2) Caatinga refers to the semi-deciduous scrub-forest of the northeastern Brazilian interior. (3) Agreste designates the transitional forest, intermediate in structure and position between the mata and the caatinga.[32]

137 Vegetation Types. The narrow coastal plain of eastern Brazil, from the Rio Paraíba—in eastern Rio de Janeiro state—to central Bahia, bears a heavy evergreen forest or selva.[33] The northern end of this forest belt is the Baía de Todos os Santos. Although the trees are lower and the species somewhat less diverse than in northern Brazil, the littoral forests of the Recôncavo and the Bahian coast farther south are a characteristic variation of the "tropical rain forest."

[TEXT CONTINUED ON PAGE 55]

*102
137
• 311


10%
20%
20%
10%
20%
30%
20%
20%
-c%
10%
20%
30%
20%
40%

RECÔNCAVO OF BAHIA

Per cent of the Total Area in "Exploited Mata"—1940

Source of data: Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia. Vol. II.

MAP 14

137 Either because of some ecological limit or because almost all of the forest, even the tallest part, is second-growth, there usually are only two tiers of forest trees. Below the trees there is usually a mass of lianas and dense impassable brush. Often, however, the forest is too young to be fully developed, and there are vast areas of low second-growth trees protruding out of a jungle of climbers, creepers, low brush, and herbaceous plants. This low second-growth, called capoeira de mata, is especially common within the Recôncavo and is the dominant forest type in a zone bounded on the south by an arc from Salvador to Cachoeira and on the north by the limit of the littoral forest. The second-growth forest is characteristic also of the island of Itaparica. The forest of the mainland coast south of the estuary of the Rio Paraguaçu, both within and beyond the Recôncavo, is usually older and thus taller--this southern Bay coast is a zone of widely-scattered cultivation. The forest is interrupted in some places by open areas of grass or low deciduous trees. These openings seem to occur in areas of particularly sandy soils. The littoral forest is used primarily as a land reserve for a system of shifting cultivation and secondarily as a source of fuel (charcoal) and lumber. It is not used to any appreciable extent as pasture, even where the grassy openings are extensive.

137
311

137 North of the Bay the evergreen littoral forest gives way to the agreste--the semi-deciduous transition forest. The agreste is differentiated from the mata by its deciduous trees and shrubs and by the frequency of the breaks in the forest where open patches of grass are found. The dominant cover is, however, a very dense growth of gnarled brush and low deciduous trees. Above these rise scattered taller deciduous trees and occasional palms, especially the wax palms (such as carnauba). All the vegetation is sub-xerophytic. The agreste is

137 The seasonal variation of the *agreste* is much like that of the *caatinga*, but the extremes of vegetative luxuriance are less marked. The scattered evergreen trees and shrubs make the *agreste*, in the dry season, less of a monochrome than the *caatinga*.

In addition to the general contrasts between the three basic vegetation types, there are lesser variations within each which are the result of differences in exposure, soil, and land use. These differences are clearly to be seen in the contrasting varieties of scrub forest. In the *caatinga sêca* (dry scrub forest) the trees are low, usually less than 4 to 5 meters, and the forest is open, with extensive patches of grass and of bare sand. It is most characteristic of sandy uplands in the Crystalline or Tabular Upland zones. In areas where soils, moisture conditions, land-use patterns, etc., are more favorable to forest growth, the characteristic vegetation is *caatinga grande*. The trees and tall cacti reach 7 to 10 meters, and underneath there is a continuous cover of tall herbaceous plants with little grass and no bare spots. In the *agreste*, formations similar to *caatinga grande* and *sêca* are found. Within the littoral forest, soil and exposure differences sometimes
311 produce marked contrasts. However, the intensive land use in the littoral forest has produced so much second-growth that it is not certain which variations result from environmental and which from human factors. In the littoral forest and to a lesser extent in the *caatinga* and *agreste*, there are poorly drained areas with open glades of coarse grass and rank herbaceous plants.

137
311 In the littoral forest, crop cultivation is leaving its mark upon the wild vegetation, producing a formation of low trees and dense ground cover. In those parts of the *caatinga* and *agreste* within the Recôncavo, both cultivation and grazing are constantly altering the "natural" development of the vegetation. Extensive areas of a growth

137 31 similar to *caatinga sêca* appear where soil and moisture conditions woul
seem to indicate *caatinga grande*. These areas are especially common
where cultivation and grazing are intensive.

The wild vegetation of the Recôncavo is used for forage, timbe
[313] and fuel. Only the *mata* is used for timber, and it is exploited only
on a small scale. All three of the main vegetation types contribute
toward supplying the local market with fuel--firewood and charcoal. Th
[314] *mata* is the principal charcoal source, especially in the forest zone
northwest of the city of Salvador and along the Salvador-Feira de Sant
highway. In the interior sections of the Recôncavo the *caatinga* and th
agreste provide firewood for cooking and other household purposes. Fo
grazing, the *caatinga* is far superior to the *agreste* and the *mata*, except when the latter is in the first stages of regrowth. Burning is
employed extensively in an effort to increase the grazing value of the
caatinga and *agreste*. At first this provides more grass and herbaceou
growth, but after repeated burning and continuous over-grazing, there
develops an impenetrable cover of thorny, tough brush, three to five
feet tall, and quite valueless.[35]

13 *Conclusion - Physical Setting.* The analysis of the physical
setting which is to serve as background for the discussion of agricult
in the Recôncavo does not reveal a homogeneous region. Rather it woul
seem that the Recôncavo is best visualized as a nodal region, with a
relatively homogeneous but areally restricted core and a broad transitional perimeter. The perimeter is composed of several sub-regions,
each with a distinctive transitional character. As a summation of
[128] the physical setting, each of the sub-regions of the perimeter and cor
of the Recôncavo will be assigned a name, as a matter of convenience,
with the physical elements briefly indicated for each:[36]

161 162 São Filipe, northern Conceição do Almeida, southeastern Cruz das Almas,
241 and the southeastern tenth of Muritiba.

464 [634] The boundaries of this concentration are similar to the boundaries of labor concentrations in other parts of the western Recôncavo. To the southeast the density of the cluster declines sharply across the Intermediate Hills. There are very few fields and few farmers along the estuary of the Paraguaçu, which lies beyond the hills. Much of
[311] this land is in forest. To the west the decline in density is even more abrupt. In the dry caatinga beyond the western limits of Muritiba, Cruz das Almas, and Conceição do Almeida there are only a few scattered ranchers and small-scale farmers.

From the core of the concentration the distribution of agricultural workers continues to be relatively dense toward the north and toward the southwest, and this pattern extends across the "bridge" zone and into the coffee area beyond the Recôncavo. Just beyond the Recôncavo, in the middle of the "bridge," is the city and suburban zone of Santo Antônio de Jesus, which has a minor cluster of agricultural workers. The "bridge" follows the forest and scrub-forest transition.

161 (2) The Northern Concentration: Though the northern and
162 central clusters of the agricultural labor force of the Recôncavo
241 464 are less well defined and individually less important than the
131 southwestern cluster, they are major concentrations. In the northern Recôncavo a series of clusters extending through eastern Feira de Santana, Irará, and Coração de Maria are grouped in a rough "u-shaped" pattern. This concentration is the second major element of the eccentric belt of dense agricultural labor. The verticals of the "u" follow agricultural belts along the valleys of two tributaries of the (eastern) Rio Pojuca. This is a zone of Tabular Upland and caatinga vegetation.

128 241 sketch the modes of cropland distribution which are characteristic of the region. This introductory discussion will be extended in the conclusion of the chapter, when it will be possible to discuss the general patterns of cropland distribution and the changes in the intensity of land use in terms of the specific component crops. The details of the practices of cultivation will be discussed in Chapter VI.

241 311 [171] The mean intensity of crop cultivation within the Recôncavo is high only in terms of the surrounding sertão. Indeed, there are very few areas of Brazil of any great size in which the intensity of land use is comparable to that of such areas as Northwestern Europe, Japan, India or even the Midwest of the United States. The landscape of the Recônca is composed of a series of small, intensively utilized areas separated and surrounded by zones in which the cultivation of crops is scattered. As a result, the mean intensity of cultivation is low—for the Recôncavo generally, mean figures for agricultural phenomena tend to mask great differences between specific areas. As will be seen, the chief concentrations of crop cultivation are in the Central Recôncavo and on the seaward edge of the Uplands. The principal zones of scattered cultivation are in the Intermediate Hills, in the littoral forest behin the beach line, and on the interior margins of the Uplands where the Recôncavo gradually gives way to the sertão.

241 Even within the areas of relatively intensive cultivation, there are many interruptions. These gaps are not very conspicuous within the restricted confines of the sugar-cane growing Central Recôncavo, but elsewhere the continuity of the fields is broken by patches of seco growth and by the slopelands and wet valley bottoms. Most of the cultivated areas of the Recôncavo seem to reflect the grudging acquiescenc of nature to the efforts of man and not the triumph of the cultivator

231 241 [311] [554] Livestock production, which offers social prestige as well as economic gain, may occupy land within the cultivated area which more profitably could be devoted to crops. These factors, together with the eccentricities of political boundaries and the vagaries of terrain features, help to produce many distinctive local variations of the general geographical pattern of cultivation and of specific crops.

241 As will be seen in the following discussion, both land rotation (field and fallow) and permanent systems of cultivation are practiced in the Recôncavo. Under the land rotation system, the field is planted for a single year or for several years and is then abandoned to wild vegetation for a fallow period which, in some areas of the Recôncavo, has been reduced to as little as five years. Under the system of permanent cultivation, cropping is either continuous or is interrupted only by brief, widely-spaced fallow periods--in the sugar cane area, four years of cultivation are followed by one year of fallow. The significance of the data on the per cent of the area in cropland depends in part upon the system of cultivation employed.

127 241 231 Sources of Data. The statistical data used in the analysis of crops and animals in the following sections were drawn almost exclusively from two sources. Produção Agrícola: 1948[2] was the only source available with relatively complete data, gathered on a consistent basis, for the area, production, and value of the principal crops of Brazil by município units. This basic source has been supplemented by data for livestock taken from "População Pecuária em 31/12/1948."[3] In general these two sources provide a reasonably accurate and detailed statistical basis for the analysis of crops and livestock.

127 241 However, a careful inspection of the crop data, and especially the calculation of crop yields by combining area and production data, revealed obvious errors in the figures in a number of instances. Usually

241
433
192

Supplementary Crops
(Subsistence and Commercial):

Pineapple (Abacaxi)	168 hectares
Rice (Arroz)	61 "
Tomatoes (Tomate)	46 "
White Potatoes (Batata inglêsa)	44 "
Cotton (Algodão)	40 "
Onions (Cebola)	14 "
Garlic (Alho)	5 "
Green or Snap Beans (Fava)	4 "

241 311 245 On the basis of the above figures, the total cultivated land in the Recôncavo in 1948 was about 80,000 hectares. In addition to the above, there are a number of tree crops, not cultivated in the true sense, which are important in the agricultural complex. More often than not these "crops" are of spontaneous origin.

[192]

African Oil Palm (Dendê)
Mango (Manga)
Jack Fruit (Jaca)
Cashew (Caju)
Bread Fruit (Fruta de pão)

231 The following animals are important in the livestock economy of the Recôncavo:

[192]

Cattle (Bovinos)
  Cows (Vacas)
  Oxen (Bois de trabalho)
Sheep (Ovinos)
Goats (Caprinos)
Swine (Suinos)
Donkeys (Asininos or Burros)
Mules (Muares)
Horses (Equinos or Cavalos)

These animals will be discussed in the chapter on animal industry (Chapter VII).

244 Manioc. Manioc was one of the most important cultivated plants which the Portuguese colonists borrowed from the Indians of Brazil.
[175] Flour made from the manioc root, farinha de mandioca, was the basic
[262] subsistence food of the colonial sugar economy and remains today the
[178]
[565] principal element of the diet of much of the Brazilian lower class.
000 Manioc production is most notable along the coast of Brazil, from the

B 244 433 Manioc production is most notable along the coast of Brazil, from the mouth of the Amazon to Rio Grande do Sul, but it has considerable importance in the interior of the eastern half of the country.[4] The tonnage of manioc production in Brazil is exceeded only by that of sugar cane--thus manioc is produced in greater quantity than corn, beans, or rice, the other basic subsistence crops. However, the total value of manioc production is less than that of coffee, cotton, [illegible], corn, or rice. BB 244 311 433 262 In the Recôncavo the cultivated area of manioc, over 22,000 hectares, exceeds that of any other crop, and the value of its production is second only to tobacco. It is usually grown as a subsistence crop for local consumption, but there are a few areas of surplus production.

NB BB 244 252 262 _Mandioca_--manioc, cassava, or _yuca_--is a stem-propagated perennial which is tolerant of a variety of edaphic, climatic, and cultural conditions. The rootstock of the bitter variety--_Manihot utilissima_, or _M. esculenta_--which is most common in Bahia, contains a poisonous substance--manihotoxine--which must be removed before it can be used as human food. In the Northeast the roots almost universally are converted in crude mills into _farinha de mandioca_, a coarse flour which is eaten in either a raw or cooked state.[5] Sweet manioc (_manihot api_, in Brazil called _aipim_) is cultivated on a small scale. The rootstock of this variety may be eaten without extensive processing and is prepared, like the white potato, by boiling.

BB 244 252 433 The cultivation of manioc is a widespread feature of the cultural landscape of east-central Bahia, overshadowed only by the low and scrubby second growth, _capoêira_, which follows the intensive cultivation of this plant under a system of land rotation. Manioc cultivation and the processing of its roots are the most characteristic pursuits of the rural people--and often the most primitive.

> NB 244 252 Manioc is generally cultivated by hand by small cultivators on land near the huts in which they live--[land] called the mandiocal, very common in the interior of the state. The immediate preoccupation of the sertanejo [countryman of the interior] after the construction of his house is the planting of manioc to secure cheap food--either sweet manioc or bitter manioc, which is transformed into flour. All the family are employed in this work. The industry of flour production is rudimentary and it uses simple processes.

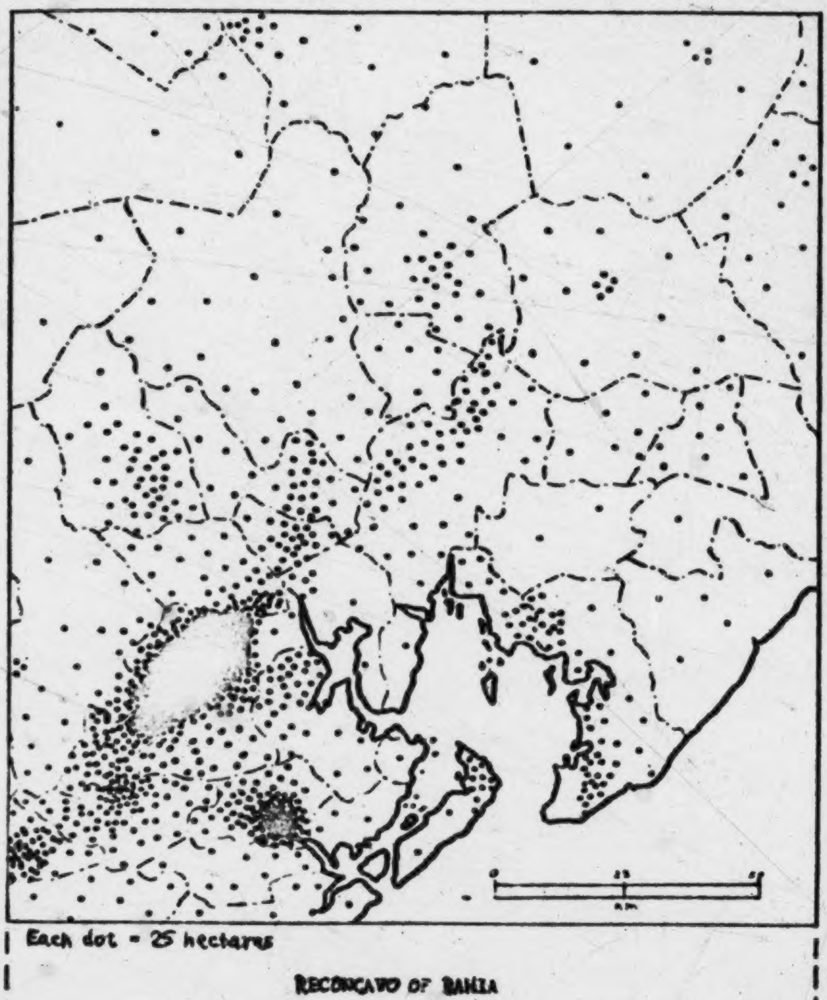
> BB NB 244 43 161 The cultivation of manioc in Bahia is to provide flour for the local market, since the state does not export this product. The development of this culture is, therefore, closely related to the distribution of population, the most productive zones which are noted on the map corresponding to regions where the population is most dense. It is perfectly reasonable that the most productive region corresponds to the Recôncavo, where there is concentrated the mass of the population of Bahia and a large number of towns and cities, the most important and populous in the state. . . . . . . it is the region of the most highly developed agriculture in the state; it united a relatively dense rural population with manioc, almost always cultivated on a large scale in the zones of the cultivation of tobacco.[6]

BB 244 311 433 As is indicated in the foregoing quotation, the distributional pattern of manioc reveals a very close association with the cultivation of tobacco and with certain urban centers. But as might be expected in view of the broad environmental tolerance of manioc, its distribution within the Recôncavo is not directly determined by any particular physical factor. Manioc is grown in all parts of the Recôncavo, excepting only the compact pockets of sugar cane cultivation. Only one município, São Sebastião, grew less than 100 hectares or produced less than 1,000 tons of tubers in 1948. In eight municípios the area of manioc cultivation exceeded 1,000 hectares, and the production was more than 10,000 tons in each. About 28 per cent of the cropland of the Recôncavo was in mandioca.[7]

The major concentration of manioc cultivation (Maps 22 and 23) and production (Maps 24 and 25) is along the eastern edge of the Crystalline Uplands in the Southwestern Recôncavo, where in 1948 three municípios[8] grew 54 per cent of the Recôncavo's 22,472 hectares of

[TEXT CONTINUED ON PAGE 154]

*402
244
• 311



Each dot = 25 hectares

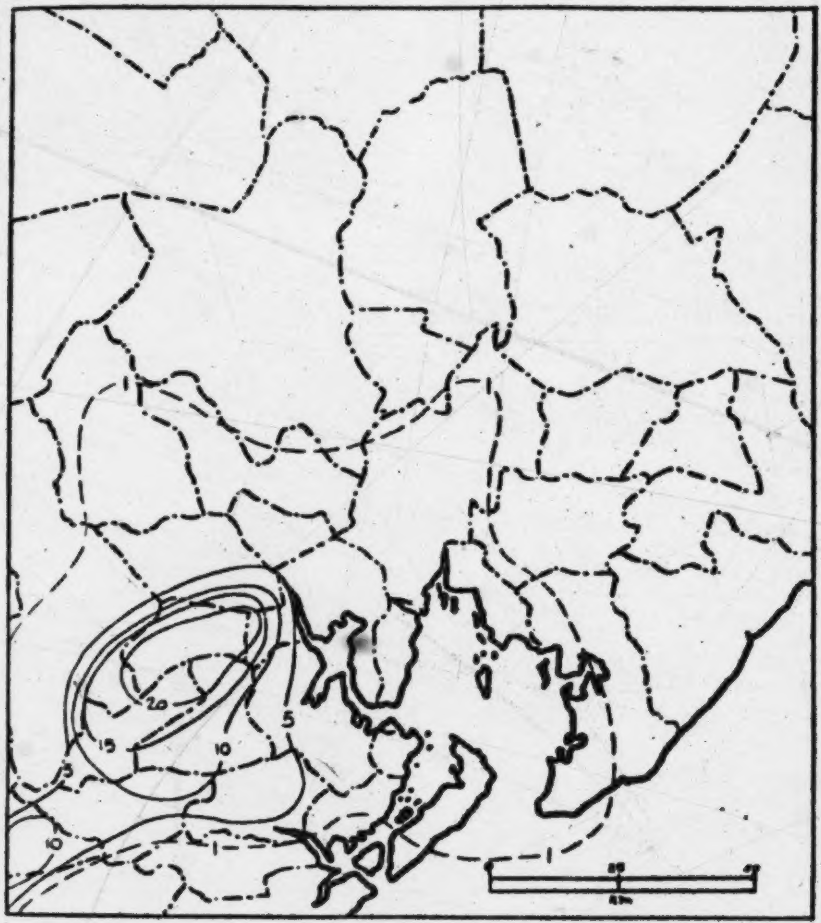
RECONCAVO OF BAHIA

Area in Manioc—1948

Source data modified from *Produção Agrícola*: 1948.

MAP 22

*102
244
311



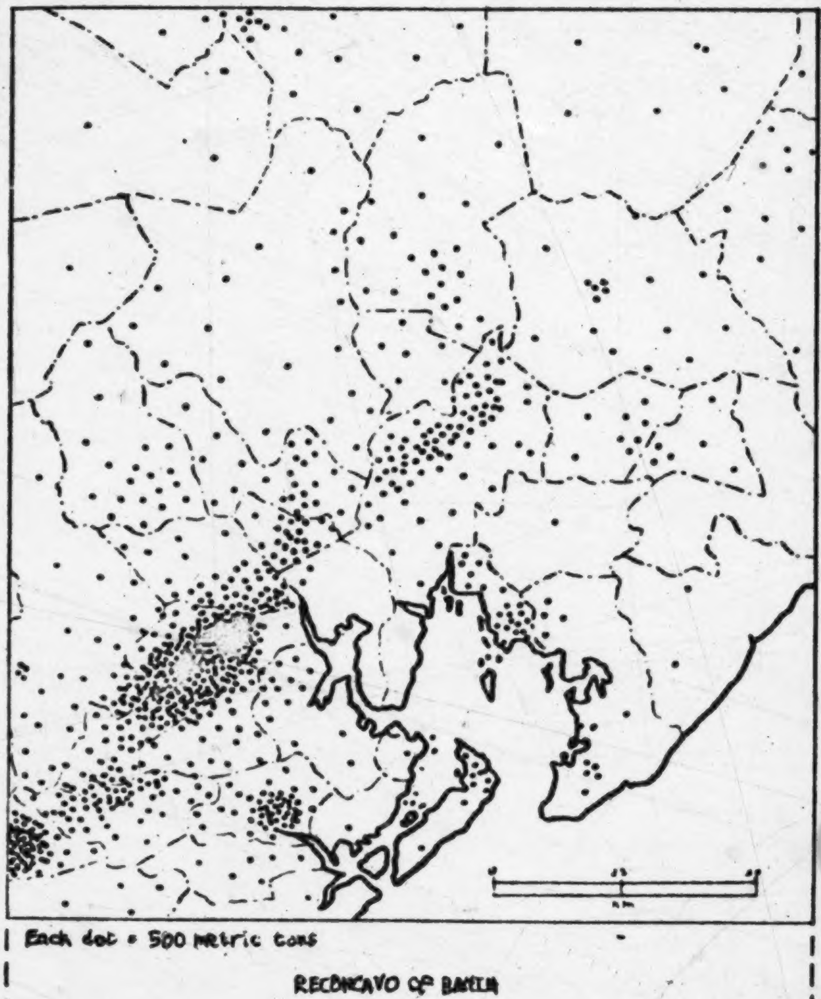
RECÔNCAVO OF BAHIA

Hectares of Manioc per Square Kilometer of Total Area—1948

Source data modified from Produção Agrícola: 1948.

MAP 23

902
244
● 311
433



Each dot = 500 metric tons

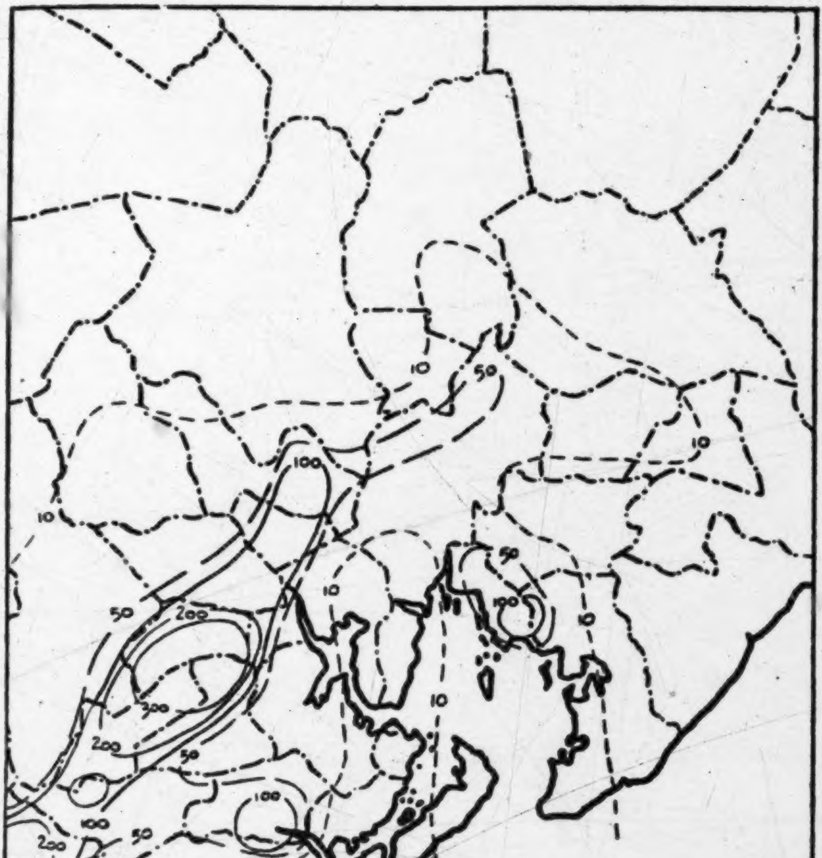
RECONCAVO OF BAHIA

Production of Manioc--1948

Source data modified from Produção Agrícola: 1948.

MAP 24

*102
244
433
• 311


10
50
100
10
10
50
200
10
50
100
10
300
10
200
50
100
100
200
50
10
0
20
Km.

RECÔNCAVO OF BAHIA

Tons of Manioc per Square Kilometer of Total Area—1948

Source data modified from Produção Agrícola: 1948.

MAP 25

244 433 manioc and produced 38 per cent of its 393,720 tons of harvested roots. 311 Within this sub-region manioc occupied up to 20 per cent of the total land area, i.e., 20 hectares per square kilometer (Map 23). Despite the [249] intensity of cultivation and the concentration of production, the crop is viewed by the people primarily as a means--subsistence--to an end--[242] leaf tobacco production.[9] Manioc characteristically succeeds tobacco in the field and fallow rotation system and is used to extract the maximum possible value from such nutrients as remain in the soil.[10]

244 249 A close areal and functional relationship between the two crops is characteristic also of the linear zone of manioc cultivation which follows the belt of Intermediate Hills and the inner edge of the Uplands from the Rio Paraguaçu--at Cachoeira--to Irará. Much the same relationship exists in Santo Estêvão in the extreme west of the Recôncavo, where manioc, and tobacco, cultivation is concentrated in a zone of low serras. Apparently tobacco cultivation has been fixed by the greater precipitation around these serras, and manioc is grown in association.

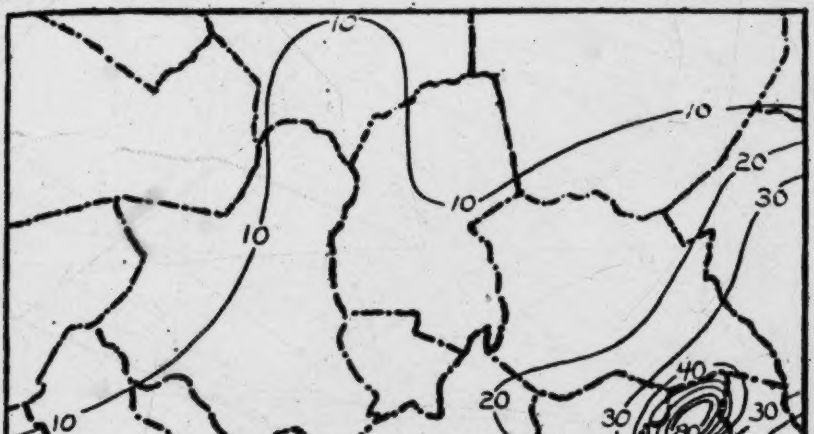
The major southwestern concentration of manioc is continued beyond the Recôncavo along a belt extending through Santo Antônio and into the "coffee zone."[11] The cluster of manioc around the cidade of Santo Antônio is circum-urban, but the principal functional association is with tobacco cultivation, rather than with the small urban market. [443] On the other hand, the concentration of manioc production around the city of Nazaré reflects a dependency on the local urban market and probably on the market of Salvador. Minor concentrations of cultivation in northern Itaparica and around Salvador also are related primarily to the market of the capital city.

244 311 The relative place of manioc within the agricultural system, as measured by the per cent of the total cropland which it occupies, varies widely within the Recôncavo (Map 26). The statistical extremes are

[TEXT CONTINUED ON PAGE 156]

1:Haskins K-4,5 (1952-1954)1956 SO11 Bahia Brazilians SO11

102
244
311


10
10
10
10
10
20
40
30
80
30
20
20
20
30
40
50
20
30
50
40
20
40
60
40
40
50
60
50
30
50
70
40
40
30
20
40
50
60
40
60
40
Km.

RECÔNCAVO OF BAHIA

Per cent of Cropland in Manioc--1948

Source data modified from Produção Agrícola: 1948.

MAP 26

244 311 represented by two adjacent *municípios* of the Eastern and Central Recôncavo--Pojuca, where manioc occupied 81 per cent of the total cropland in 1948, and São Sebastião, where it occupied only 2 per cent. However, the significance of this contrast is diminished when it is seen that the total cropland of all crops in these *municípios* was only .8 per cent and 4.7 per cent, respectively, of the total land area. In those *municípios* where over 5 per cent of the land area was cultivated, the range was from 8 per cent of the cropland in manioc—Irará—to 60 per cent—Conceição do Almeida.

244 241 311 There are two major zones in which manioc has pre-empted the cropland, both of which are marginal to a belt of commercial production of tobacco, sugar cane, or coffee which follows the forest and scrub-forest transition from the coffee zone northward into the Southwester Recôncavo. This commercial crop belt is paralleled on the east by a zone of manioc cultivation in the forested areas back of the beach line—a zone which is a continuation of an extensive area of monocultural shifting cultivation of manioc centered farther south.[12] Around the city of Nazaré, which lies very near the southern limit of the Recôncavo, as much as 70 per cent of the cropland is in manioc. The cultivation of manioc is also important on the sandy forested zone west of the Bay as far north as the estuary of the Paraguaçu and on the opposite side of the Bay north of Salvador. On the west side of the commercial crop belt, in Laje, Santo Antônio, and the Southwestern Recôncavo, there is another zone in which manioc is the dominant crop. In the dry *caatinga* the areas of cultivation are concentrated around the low *serras* west of the Recôncavo. However, the manioc which occupied up to 60 per cent of the cultivated area along the western limit of Conceição do Almeida in 1948 was grown as a part of the tobacco-manioc system.

244 311 From the latitude of the head of the Bay northward, manioc appears as a dominant crop only in the município of Pojuca. In the Central Recôncavo, around the perimeter of the sugar cane area, manioc generally occupied, in 1948, less than 30 per cent of the cropland. In the north, [243] along the borders of the Recôncavo, the share of manioc in the cropland dropped to 10 per cent, and it was replaced by corn and beans as the basis of the subsistence economy.

244 311 433 The yield of manioc in the areas of heavy production was relatively low—10 to 15 tons of roots per hectare—compared to the Central Recôncavo, which produced small quantities at 30 tons per hectare (Map 27). These [134] differences in yield are related in part to the difference in soil fertility between the Cretaceous soils of the Central Recôncavo and the sandy loams of the Southwest. In addition, manioc is cultivated alone in the former zone, but follows the soil-taxing tobacco plant on the fields of the Southwest, thus further reducing the yield. The mean yield of manioc in the Recôncavo in 1948 was 14 tons per hectare, which is close to the 13 tons per hectare of Brazil and of the French Cameroons, but much higher than the 7 tons per hectare of Java and Madura.[13]

244 249 Manioc is, then, a crop characteristic of most parts of the Recôncavo and the surrounding zone, except in the sugar cane area and [242] the Tabular Uplands. The area of greatest concentration of cultivation and production is the Southwestern Recôncavo where manioc is integrated with tobacco production in a system of land rotation. In addition, as discussed above, manioc has the greatest relative importance of the crops of two zones in which the total area cultivated is small: the southwestern belt of forested lowland and the drier, scrub-forest Crystalline Uplands.

249 the plant will no longer produce marketable leaves. This is done by cutting the entire stalk just above the shoots and allowing the plant to re-grow.. The cutting and harvesting are repeated several times, producing a large quantity of leaf, but the prolonged harvest has resulted in accelerated impoverishment of the soil.

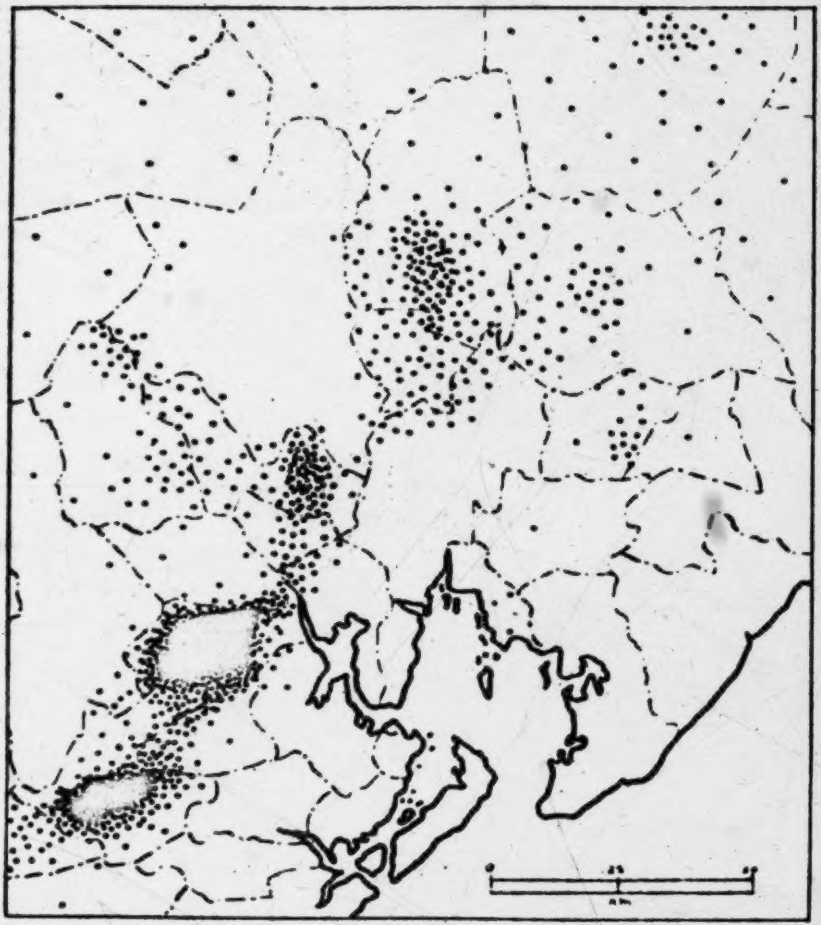
249 In 1948 the Recôncavo planted almost 22,000 hectares of tobacco,[15]
311 and harvested over 20,000 tons of leaf. Each of four Recôncavo *muni-*
433 *cípios* grew more than 2,000 hectares and harvested over 1,000 tons: Cruz das Almas, Conceição do Almeida, São Gonçalo, and Irará. Two outlying *municípios*—Alagoinhas and Santo Estêvão—cultivated 1,000 hectares or more. In addition, one *município* contiguous with the Recôncavo, Santo Antônio, had over 6,000 hectares of tobacco and harvested over 5,000 tons of leaf. In Bahia, this *município* was second only to Cruz das Almas in area and production of leaf tobacco.

The maps of area (Maps 28 and 29) and production (Maps 30 and 31) of tobacco indicate quite clearly the overwhelming importance of the Southwestern Reconcâvo and the adjacent northern part of Santo Antônio. This area resolves itself into two clusters (Table XIII). The most important of these is centered in Cruz das Almas and includes the adjacent parts of Conceição do Almeida, São Filipe, and Muritiba. In 1948 this cluster had about 10,000 hectares of tobacco—46 per cent of the Recôncavo tobacco area—and produced about 9,500 tons—48 per cent of the total crop. Because of the high quality of the leaf, the crop of this area was valued at almost 58 per cent of the total value of tobacco production in the Recôncavo.

The second most important cluster of leaf tobacco production in east-central Bahia is centered on the *cidade* of Santo Antônio and lies almost entirely outside of the Recôncavo. In 1948 the total area of tobacco in this cluster was about 6,500 hectares, and the total

[TEXT CONTINUED ON PAGE 166]

*102
249
• 311



Each dot = 25 hectares

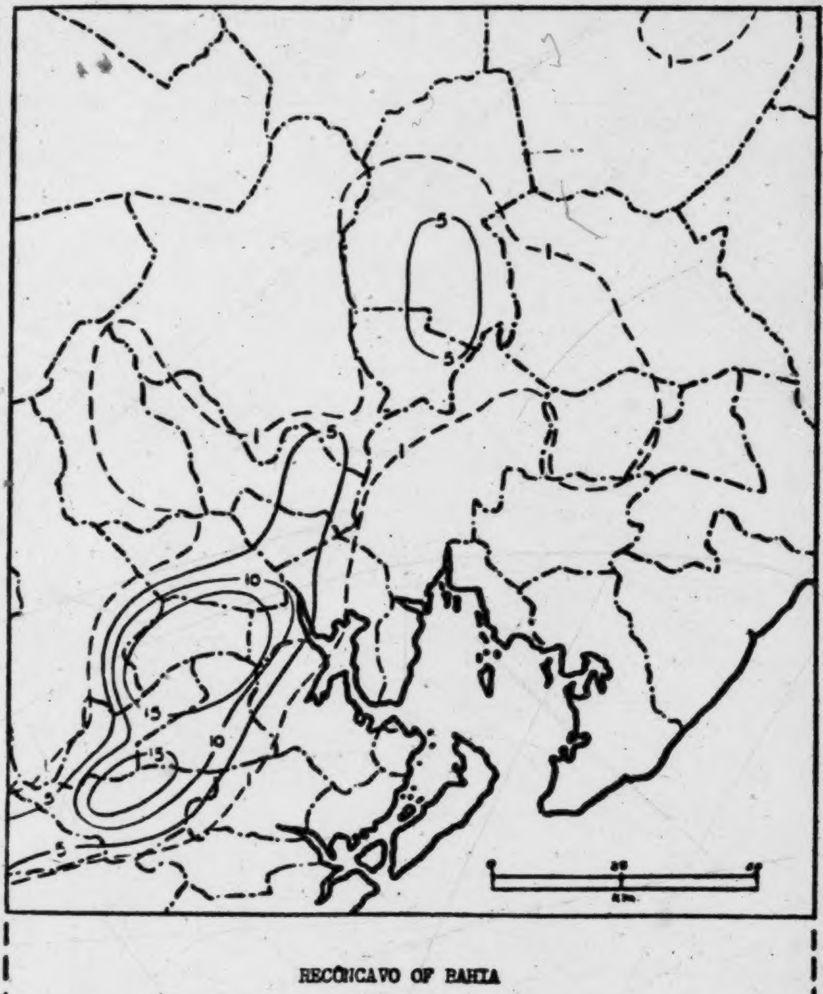
RECONCAVO OF BAHIA

Area in Tobacco—1948

Source of data: Produção Agrícola: 1948

MAP 28

*102
249
• 311


5
5
5
1
10
15
15
10
5
5
1
0
20
40
Km.

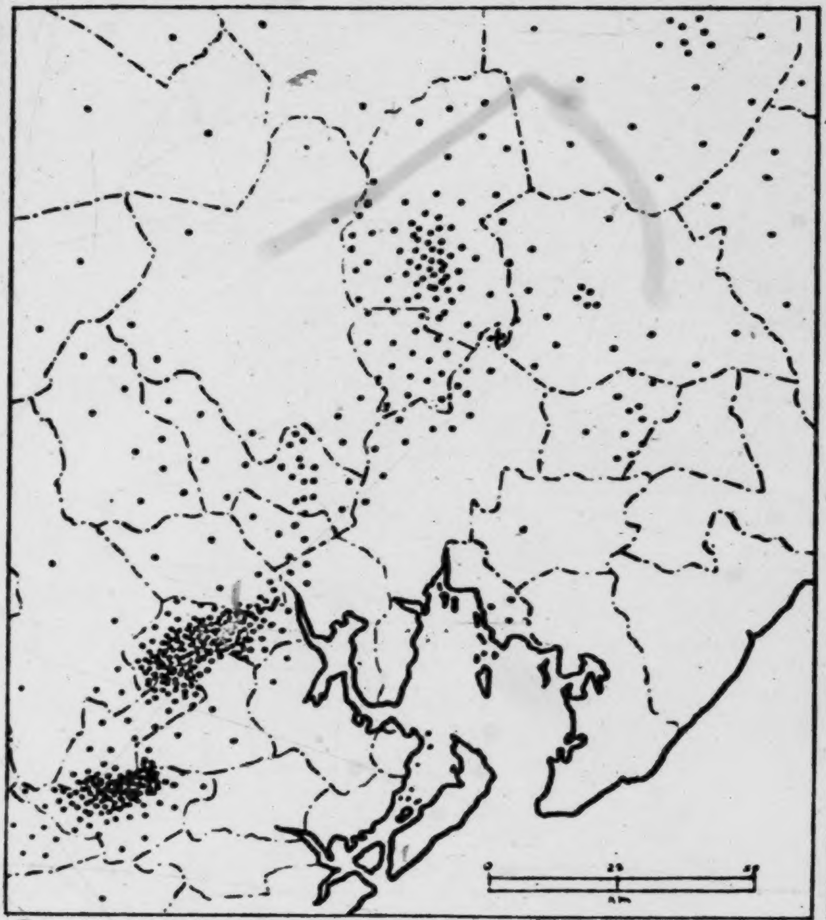
RECÔNCAVO OF BAHIA

Hectares of Tobacco per Square Kilometer of Total Area--1948

Source of data: Produção Agrícola: 1948.

MAP 29

*102
249
• 311
433



Each dot = 50,000 Kilograms

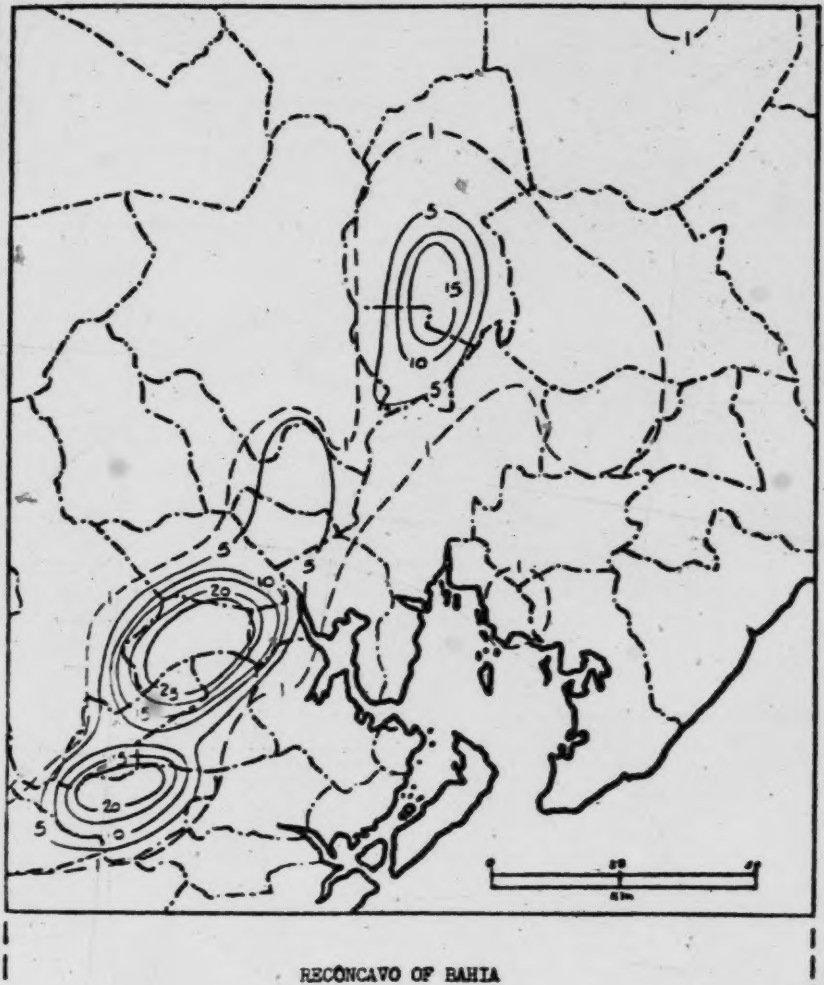
RECONCAVO OF BAHIA ·

Production of Tobacco--1948

Source of data: Produção Agrícola: 1949.

MAP 30

*402
249
● 311
433


1
5
15
10
5
5
5
10
20
25
15
1
5
20
5
0
0
20
40
Km

RECÔNCAVO OF BAHIA

Tons of Tobacco per Square Kilometer of Total Area—1948

Source of data: Produção Agrícola: 1948.

MAP 31

TABLE XIII

PRINCIPAL CENTERS OF TOBACCO PRODUCTION IN THE RECÔNCAVO AND IN BRAZIL IN 1948

249
• 311
433

	Area (ha.)	Production (tons)
Southwestern Recôncavo:		
Cruz das Almas (all)	6,850	6,680
Conceição do Almeida (part)	2,000	2,000
São Filipe (part)	500	480
Muritiba (part)	810	500
Total	10,160	9,660
Santo Antônio:		
Santo Antônio (all)	6,200	5,250
Conceição do Almeida (part)	200	400
São Filipe (part)	190	190
Total	6,590	5,840
São Gonçalo (part)	2,000	900
Irará (part)*	2,500	3,000
Total - Principal Centers	21,250	19,400
Total - Recôncavo	21,886	20,191
Total - State of Bahia**	44,248	35,758
Total - State of Minas Gerais**	23,452	13,340
Total - Rio Grande do Sul***	40,236	44,495

*Irará produced a relatively large amount of tobacco for its area, but this was of a stronger and less valuable type of leaf tobacco ("Feira").

**Including a large quantity of rope tobacco--fumo em corda.

***Principally cigarette tobacco.

Source: Produção Agrícola: 1948.

production about 5,800 tons, so that it was somewhat over one-half as important as the Southwestern Recôncavo cluster discussed above.

Two lesser clusters centralize tobacco cultivation north of the Rio Paraguaçu. One is around the cidade of São Gonçalo, with about 2,000 hectares and 900 tons of tobacco in 1948. In the Northern Recôncavo, Irará was the center of a less compact concentration, with about 2,500 hectares and 3,000 tons of tobacco in 1948.

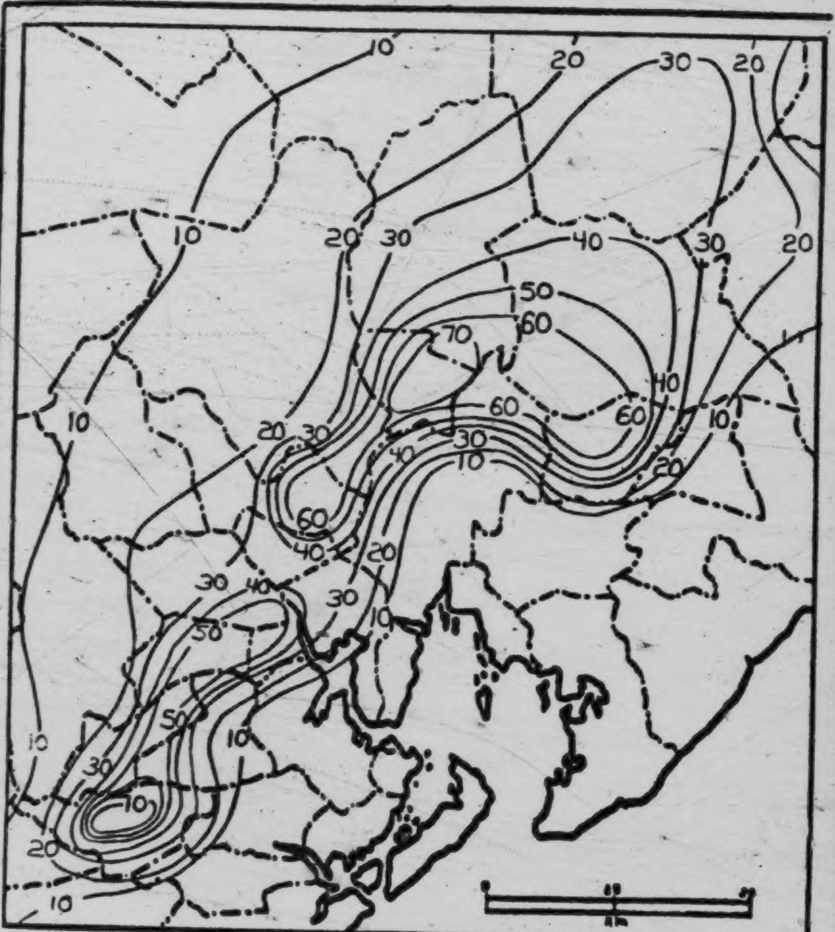
249 In addition to these major and minor concentrations of production, there was scattered cultivation in most of the outer ring of municípios of the Recôncavo, especially in Catu, in Alagoinhas, and in Santo Estêvão and adjacent western São Gonçalo. On the other hand, tobacco cultivation was conspicuously absent in the Central and Southern Recôncavo.

249
311 In 1948 tobacco was grown on 27 per cent of the total cropland of the region. The zone of intensive tobacco production, as shown by the proportion of the cultivated land which it occupies, is clearly revealed on the accompanying map (Map 32). In a continuous belt, which follows the humid edges of the Uplands and adjacent Intermediate Hills from Santo Antônio to Catu, tobacco was grown on over 30 per cent of all cropland in 1948. There were extensive areas in which over half the cultivated land was in tobacco—a remarkable showing for a non-food commercial crop grown on a small scale by semi-subsistence cultivators.

The gradients which separate the belt of intensive tobacco production from the Bay littoral and from the Central Recôncavo are very steep. On the other hand, the inland transition from intensive tobacco production to the scattered cultivation of the dry caatinga is very gradual. In the lowlands tobacco almost everywhere occupied less than 10 per cent of the cultivated area in 1948; in the caatinga to the west it was grown on 10 to 20 per cent of the total cropland.

249
134
132 There is a basic association between tobacco cultivation and the Crystalline and Tabular Upland; production is concentrated along the wetter, inner edge of these formations, in a zone which closely corresponds to the forest and scrub forest boundary. Tobacco is practically excluded from the humid Coastal Plain and littoral sections of the Intermediate Hills. It might be assumed that the location of tobacco is a result of the monopolization of the humid, clay-soil Coastal Plain

*102
249
• 311


10
20
30
20
10
20
30
40
30
20
50
60
70
60
40
10
60
60
20
30
30
10
10
40
60
40
20
30
40
30
50
10
50
10
10
30
10
20
10

RECÔNCAVO OF BAHIA

Per cent of Cropland in Tobacco—1948

Source of data: Produção Agrícola: 1948.

MAP 32

B BB 243 ● 311 433 Like manioc and tobacco, corn is an indigenous crop which was borrowed from the Indians in the early phases of European settlement and which became a basic subsistence crop in Brazil. Its cultivation, like manioc, is a characteristic feature of the agricultural landscape over an extensive coastal belt from the Amazon to Rio Grande do Sul and, unlike manioc, beyond into northern Argentina. In Brazil, corn is cultivated on more land than any other crop, and in most states it is either the second or third crop in value. In the Recôncavo it is the fourth ranking crop in area of cultivation, but only the seventh in the total value of production. BB [244] The cultivation of corn is very closely associated, areally and functionally, with beans--"succotosh" is a common crop combination in the Northwestern Recôncavo and the adjoining region.[22]

BB 243 433 Corn also resembles manioc in the purpose of cultivation; it is primarily a subsistence crop for local consumption, but there are surplus producing areas with a rudimentary commercial corn economy. In those areas of the Recôncavo where corn is produced in small quantities, it is almost exclusively a minor subsistence crop which is eaten by the cultivator and his family, though a few ears or a small sack of shelled corn may be sold in the market for local consumption. Such semi-subsistence producers are usually small-scale farmers, squatters, or share-croppers. In the Northern and Northwestern Recôncavo, where cultivation of corn is more intensive, there are occasional large-scale corn growers, but the bulk of the area and production in this zone belongs to small operators. BB [438] Even these small producers usually sell their corn at the market—it is exchanged for the cheaper farinha de mandioca. BB [262] In the Recôncavo corn is used exclusively as a human food, and there is no corn-livestock complex.

BB 243 311 433 Only three municípios of the Recôncavo, all very large, had over 500 hectares of corn in 1948 or produced over 500 tons of shelled corn.

243 The Recôncavo as a whole had 9,679 hectares of corn, with a production
311
433 of 10,283 tons. Of this, 87 per cent of the area and 84 per cent of
the production was in Santo Estêvão, Feira de Santana, and Irará
(Maps 34, 35, and 36). The area and production of the Recôncavo were
about the same as for one adjacent município, Serrinha, which had
8,500 hectares and 11,590 tons of corn in 1948.

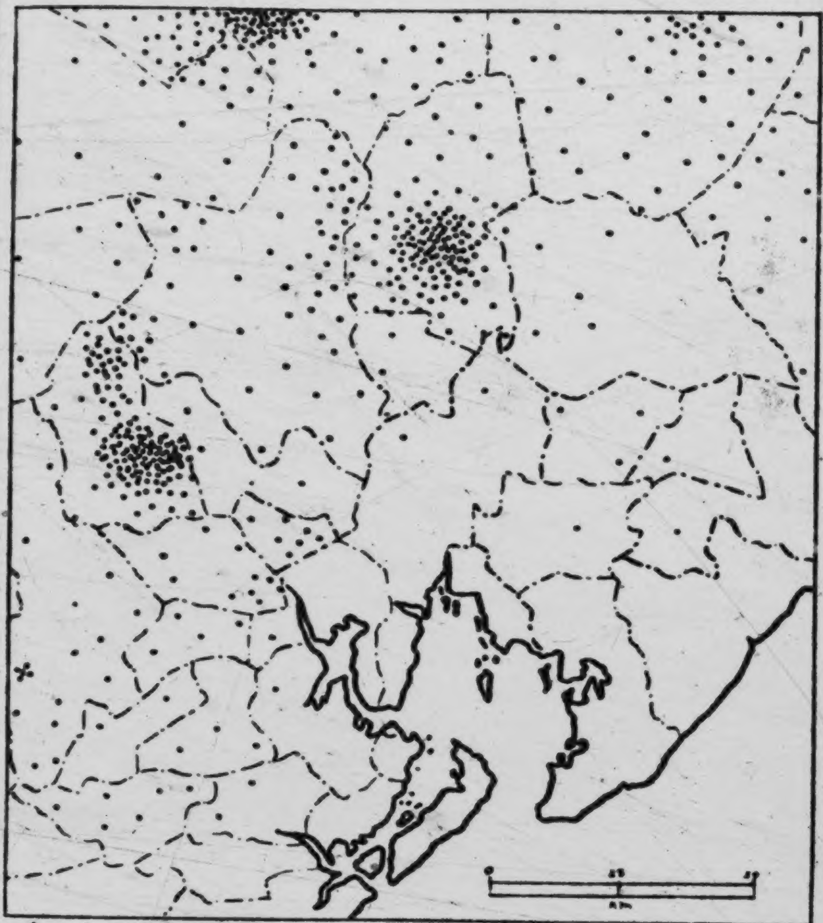
243 Most of the corn grown and produced in the Recôncavo comes from
311 two compact concentrations, one around the cidade of Irará; the other
around the cidade of Santo Estêvão. Elsewhere in the Recôncavo it is
grown either on very widely scattered plots or as a "garden" crop.[23]

The concentration of corn production is the result of several
physical and economic factors. It is cultivated on the dry margins of
the Recôncavo, where only a few restricted areas can produce a crop.
243 Though a commercial product of moderate value, its weight- or bulk-price
[438] relationship is not highly favorable to long transportation to market—
[489] in contrast to tobacco, which tends to attach itself to even the smallest and most remote semi-subsistence plot, and in contrast to beef,
[491] which in Bahia is moved to market on the hoof. The concentration
around Santo Estêvão, which is on the main trunk highway to Feira de
Santana, is favorable for the transportation of the crop, and the
Irará concentration is linked to Feira by a generally passable road.
[251] In the more humid parts of the Recôncavo, corn is restricted not only
by its poor competitive position vis-à-vis sugar cane or tobacco, but
also by its harvest requirements; it must be harvested and stored in
the proper season, while manioc may be harvested as it is needed, a
great advantage for a subsistence crop.

243 Corn, although the second most important subsistence crop of the
311
433 Recôncavo, occupied in 1948 only 12 per cent of the total cropland.

[TEXT CONTINUED ON PAGE 182]

*102
243
• 311



Each dot = 25 hectares

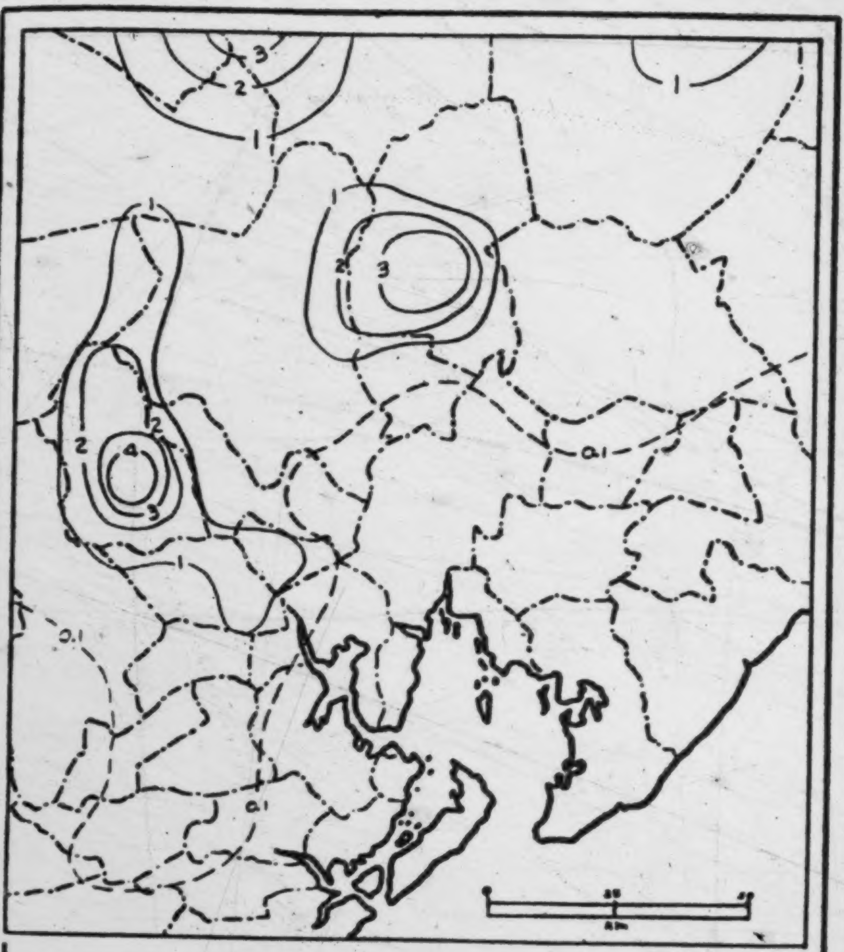
RECONCAVO OF BAHIA

Area in Corn--1948

Source of data: Produção Agricola; 1948.

MAP 34

402
243
● 311


3
2
1
1
1
2
3
1
2
2
4
3
1
0.1
0.1
0.1

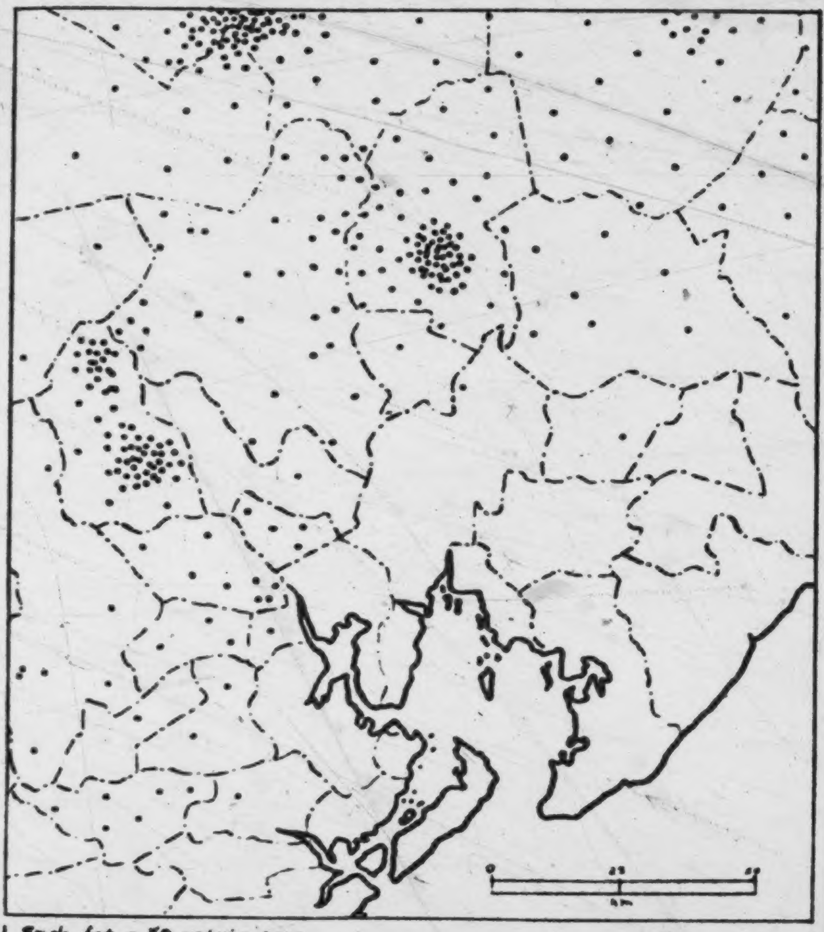
RECÔNCAVO OF BAHIA

Hectares of Corn per Square Kilometer of Total Area—1948

Source of data Produção Agrícola: 1948.

MAP 35

*102
243
• 311
433



Each dot - 50 metric tons

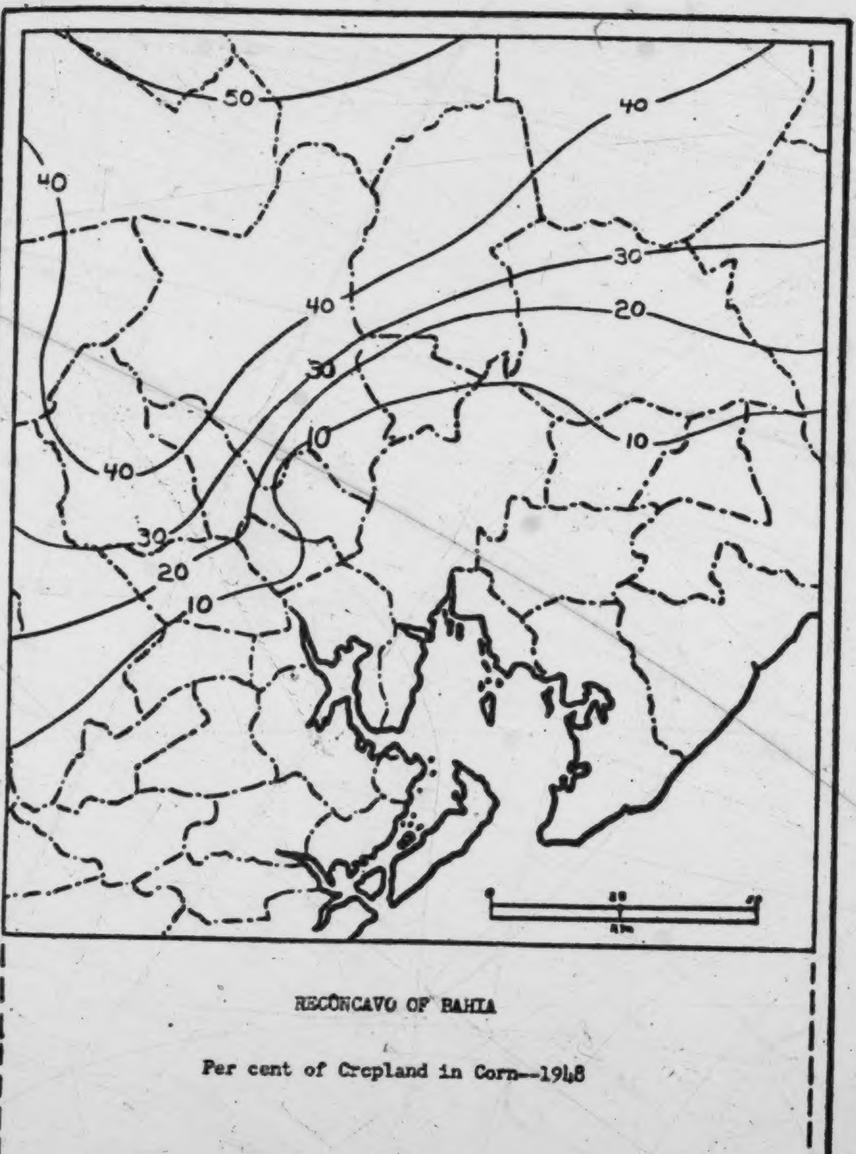
RECONCAVO OF BAHIA

Production of Corn--1948

Source of data: Produção Agrícola: 1948.

MAP 26

702
243
311


50
40
40
40
30
20
10
40
30
20
10
40
30
20
10
20
Km

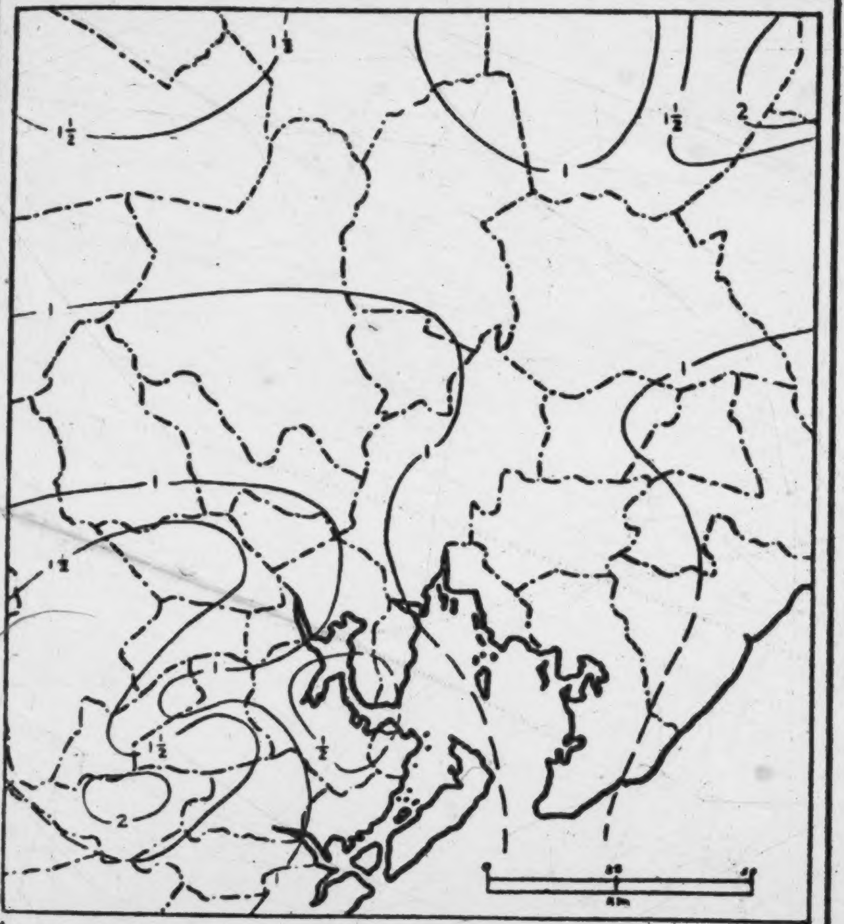
RECÔNCAVO OF BAHIA

Per cent of Cropland in Corn--1948

Source of data: Produção Agrícola: 1948.

MAP 37

*102
243
• 311
433


1½
1½
1
1½
2
1
1
1
1½
1
1½
½
2
0
20
40
Km

RECÔNCAVO OF BAHIA

Yield of Corn--1948

Tons per Hectare

Source of data: Produção Agrícola: 1948.

MAP 38

243 311 It is primarily a crop of the *sertão* of northeastern Bahia, but it has intruded upon the northern and western perimeter of the Recôncavo (Map 37). In three *municípios*--Irará, Feira de Santana, and Santo Estêvão--corn is the most extensively cultivated crop. Conversely, it is rarely seen in the humid lowlands and in the Southwestern Recôncavo. In these areas it is found only in very small, widely scattered plantings.

243 433 The mean yield of corn in the Recôncavo was 1.09 tons per hectare, compared to 1.27 for Brazil, 2.46 for the United States, 1.0 for the Belgian Congo, and .81 for Java and Madura. The accompanying map of corn yields shows a somewhat random pattern within the Recôncavo, since the total area and production were very small and local circumstances of cultivation highly variable (Map 38). However, the area of main production northwest of the Recôncavo had a relatively high yield--over 243 244 1.5 tons per hectare. In this area, corn, with beans, pre-empts the areas with the most productive soils and the greatest precipitation.

244 *Beans*. *Feijão*, or the common field bean (*Phaseolus vulgaris*), like manioc, tobacco, and corn, is an indigenous domesticate which became an important subsistence crop during the colonial period. Like corn, beans are more specifically associated with the dry *sertão* than [262] [252] with the Recôncavo. Most of the beans grown in Bahia are the black variety, *feijão preto*; the beans are dried and used with *charque* (dried beef) in a soup which is one of the basic subsistence foods of the Northeast. Beans of this and other similar varieties of the same species are grown throughout Brazil.

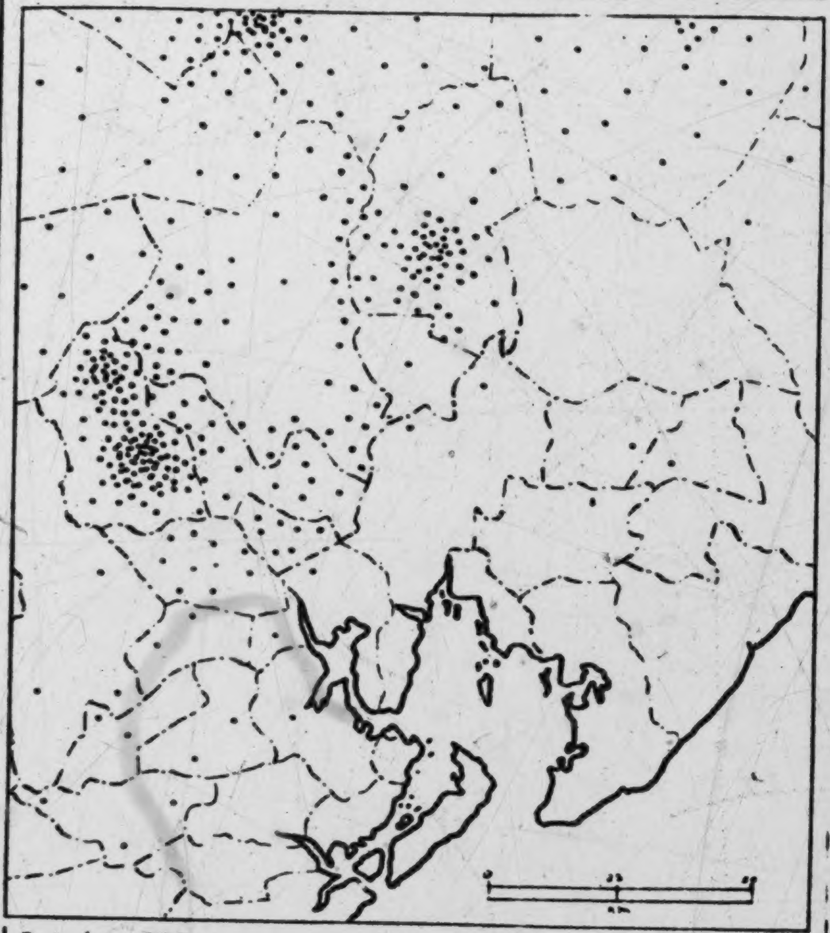
244 433 In area and in quantity of production, beans are slightly less important than corn in the Recôncavo, but the value of the bean crop is almost double that of corn. The patterns of distribution of these two crops are almost identical, and the physical and cultural factors

244 433 [311] involved are very similar (Maps 39, 40, and 41). In 1948 beans occupied 9 per cent of the total cropland of the Recôncavo. While the area of the greatest dominance of corn lies north of the Recôncavo, beans had the greatest relative importance in the west, in the município of Ipirá (Map 42). The reason for this minor difference in concentration is not apparent.

244 311 433 The yield pattern as revealed by the 1948 data is very distinctive (Map 43). Relatively high yields were closely associated with the forest and scrub-forest transition from Santo Antônio in the south to Irará in the north, where, however, less than 10 per cent of the cropland was in beans. In Muritiba, Castro Alves, and Santo Antônio, where joint corn-bean cultivation is not always the rule, yields of both plants were high. In the Northern and Northwestern Recôncavo the yield patterns of the two crops, which are usually intercropped in this area, were very different. No explanation for these differences was found. The mean yield of beans in the Recôncavo in 1948 was 988 kilograms per hectare, higher than the 690 kilograms per hectare of Brazil, the 540 kilograms per hectare of French Equatorial Africa, or the 200 kilograms per hectare of India, but much lower than the 1,220 kilograms per hectare yield in the United States.

249 Sugar Cane. Much of the history and a good deal of the cultural geography of the Recôncavo could be written in terms of sugar cane [433] [178] cultivation. The colony of Bahia was organized around the cultivation of cane, and sugar was the mainstay of the colonial commercial economy until the last half of the nineteenth century. During the colonial period the cultivation of sugar cane acquired a prestige which it has never lost, despite the fact that it is no longer the most valuable nor, it seems likely, the most profitable crop of the Recôncavo.

*102
244
• 311



Each dot = 25 hectares

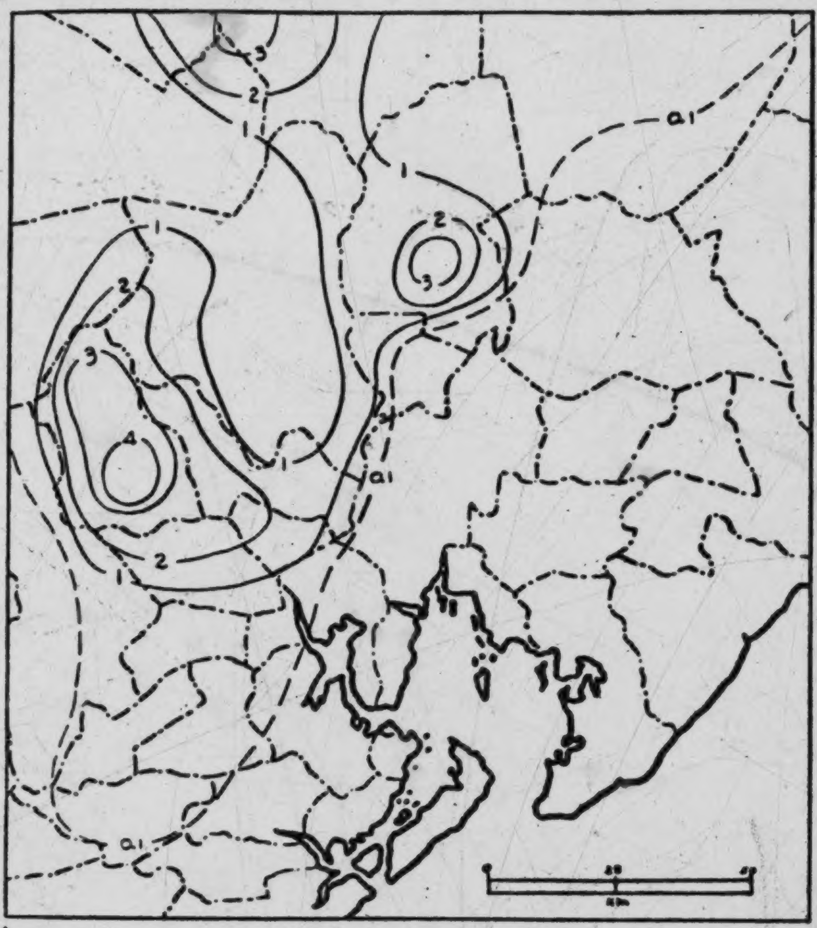
RECONCAVO OF BAHIA

Area in Beans--1948

Source of data: Produção Agrícola: 1948.

MAP 39

*102
244
• 311


3
2
1
a1
2
3
1
3
3
4
1
a1
2
1
a1

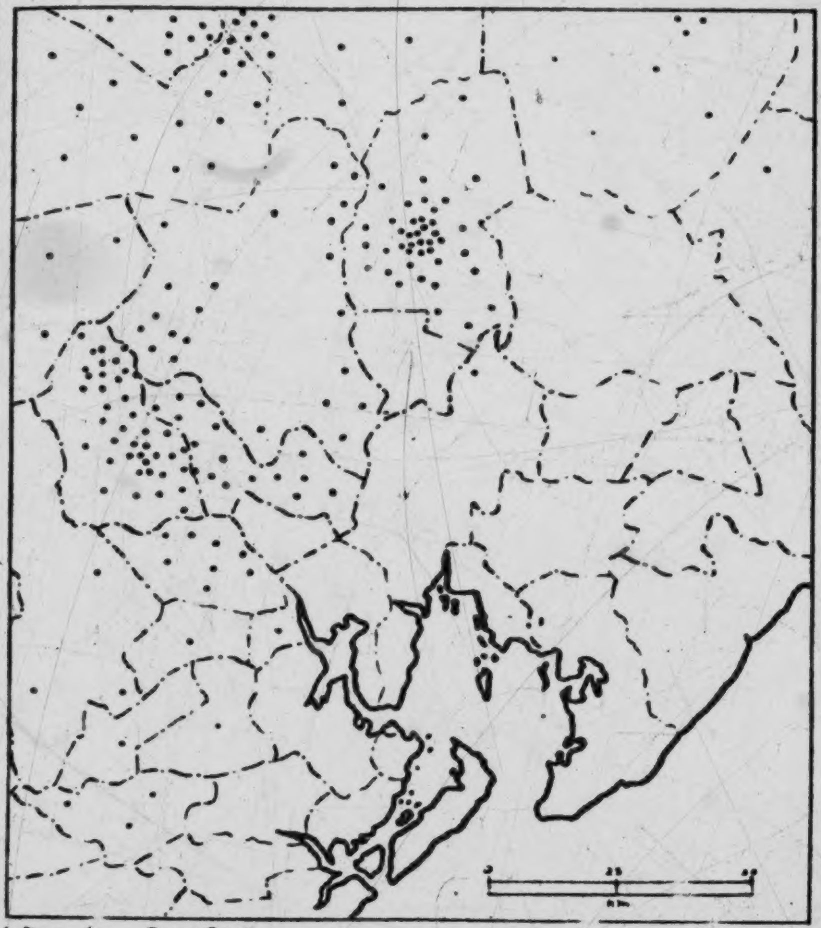
RECÔNCAVO OF BAHIA

Hectares of Beans per Square Kilometer of Total Area—1948

Source of data: Produção Agrícola: 1948.

MAP 40

*402
244
• 311
433



Each dot - 50,000 kilograms

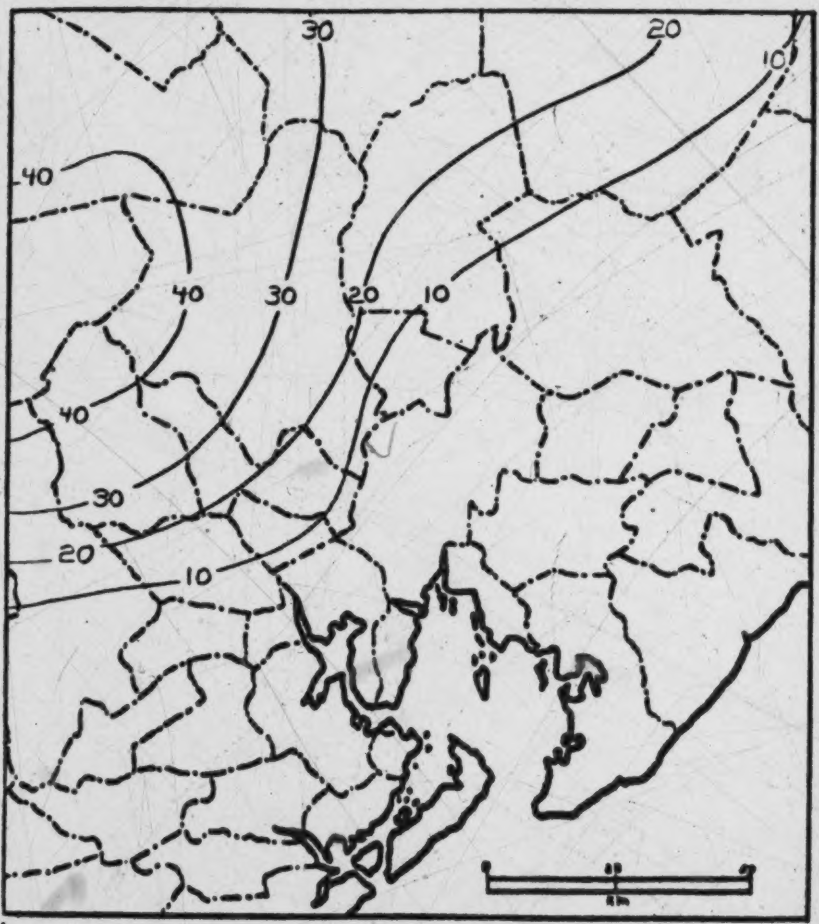
RECONCAVO OF BAHIA

Production of Beans--1948

Source of data: Produção Agrícola: 1948.

MAP 41

*102
244
• 311


30
20
10
40
40
30
20
10
40
30
20
10

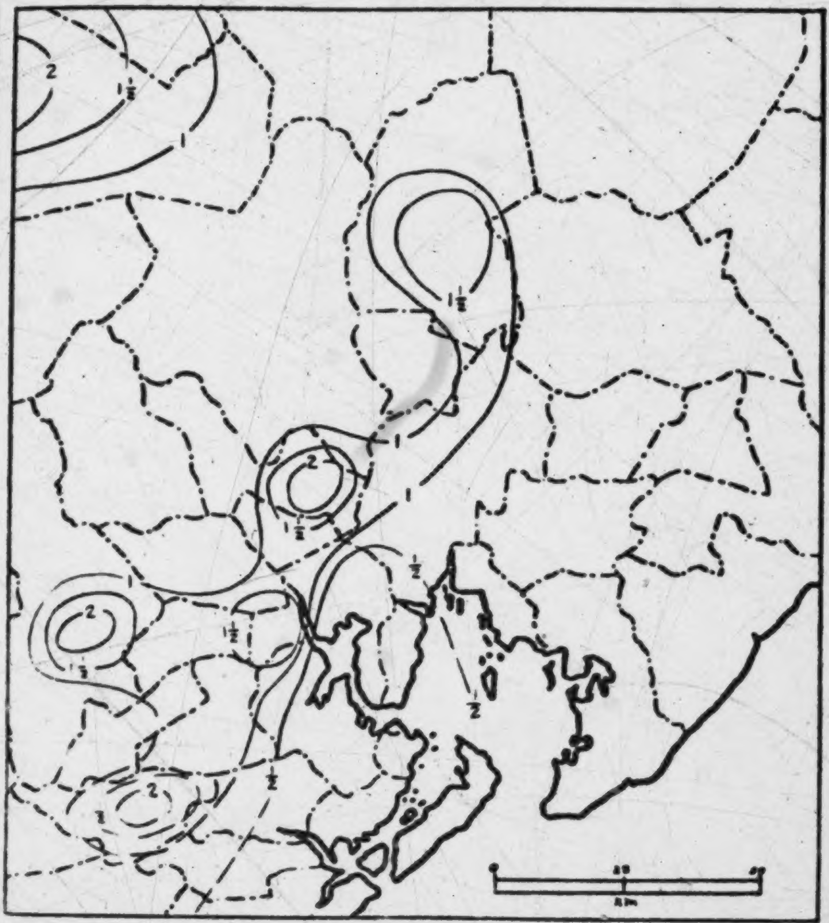
RECÔNCAVO OF BAHIA

Per cent of Cropland in Beans--1948

Source of data: Produção Agrícola: 1948.

MAP 42

*102
244
• 311
433


2
1½
1
1½
2
1½
1
1
½
2
1½
1½
½
½
2
1
½

RECONCAVO OF BAHIA

Yield of Beans--1948

Tons per Hectare

Source of data: Produção Agrícola: 1948.

MAP 43

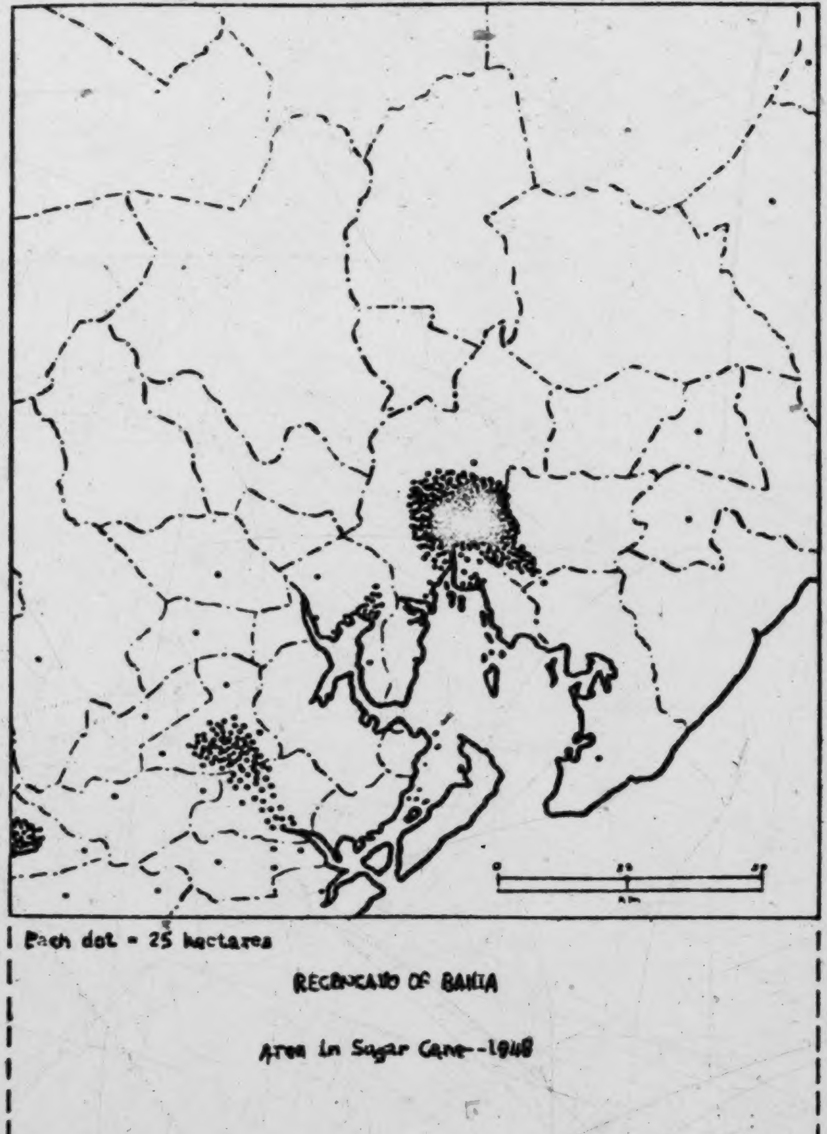
249 same planting are common--then the field is rested for a year and replanted to cane.[24]

249 311 Sugar cane is encountered in all parts of the Recôncavo, but it is produced commercially only in three very restricted and closely defined areas. Of the 11,695 hectares of sugar cane in the Recôncavo in 1948, over 6,000 hectares were in Santo Amaro and 650 hectares and 2,400 hectares, respectively, in adjacent São Francisco and São Sebastião (Map 44). The remaining one-third of the total sugar cane area was largely in São Filipe, 650 hectares, and Cachoeira, 530 hectares. The association between sugar cane cultivation and the Cretaceous soils is [134] very close. Within the Central Recôncavo, cane is grown only on the Cretaceous massapê, salão, and areia soils; although there are occasional outliers of Tertiary sands, no cane was observed on these soils in the course of field investigation. Cane cultivation in São Filipe is associated with similar heavy soils--the so-called crystalline massapê. [433] In 1948 the Recôncavo produced 670,626 tons of cane, 39 per cent of the total of the state, but only 2 per cent of Brazil's production. Eighty-two per cent of the cane of the Recôncavo was produced in the Central Recôncavo sugar cane zone of Santo Amaro, São Francisco, and São Sebastião (Map 45).

Because sugar cane cultivation is so highly concentrated, the mean value of 15 per cent of the total cropland of the Recôncavo in sugar cane is somewhat misleading. What is significant is that an estimated 90 per cent of the cropland--excluding fallow land--on the Cretaceous coastal lowland at the head of the Bay was planted to cane in 1948 (Map 46). A similar, though smaller, monocultural zone lay at the head of the Bacia do Iguape in the município of Cachoeira. In the minor sugar cane area of São Filipe, cane production was less concentrated. There was also scattered cane cultivation on the lowlands

[TEXT CONTINUED ON PAGE 194]

*102
249
• 311



Each dot = 25 hectares

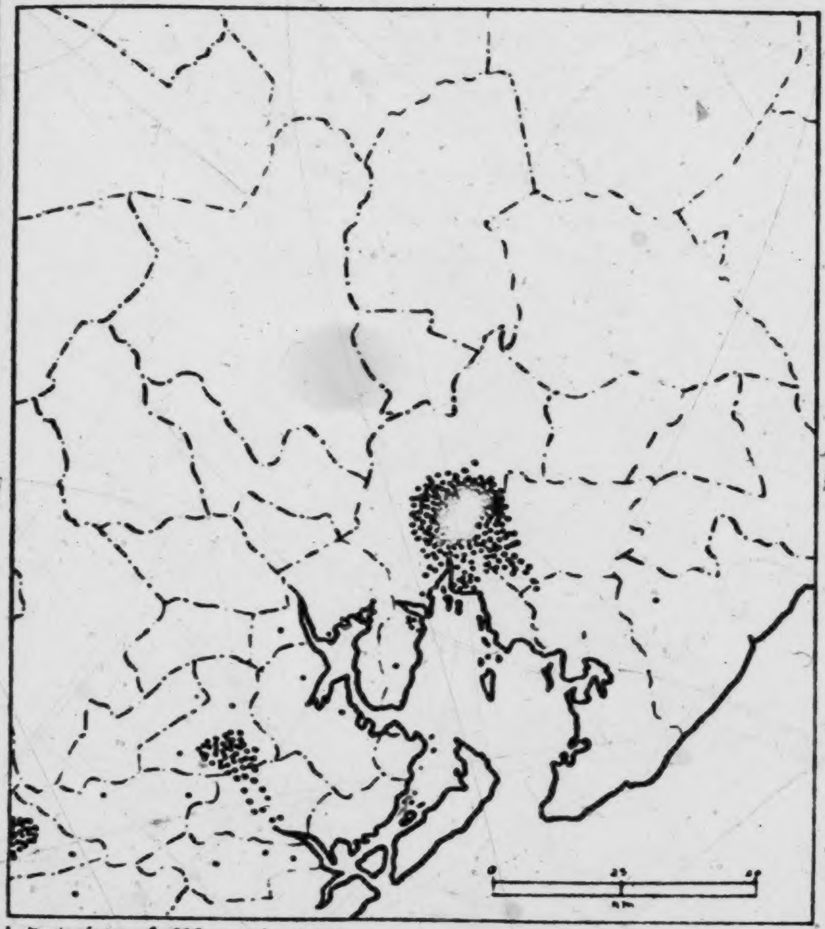
RECONCAVO OF BAHIA

Area in Sugar Cane--1948

Source of data: Produção Agrícola: 1948.

MAP 44

*102
249
• 311
433



Each dot = 2,000 metric tons

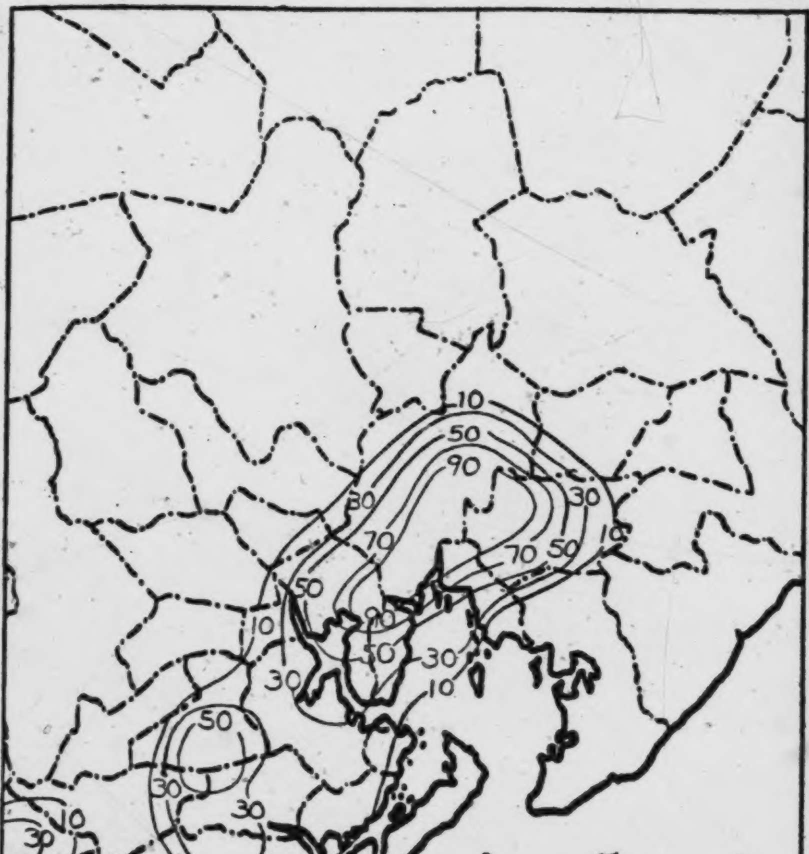
RECONCAVO OF BAHIA

Production of Sugar Cane--1948

Source of data: Produção Agrícola: 1948.

MAP 45

*102
249
• 311


10
50
90
30
70
30
10
70
50
50
10
90
50
30
30
10
50
30
30
10
30
10
0
25
50
km

RECÔNCAVO OF BAHIA

Per cent of Cropland in Sugar Cane--1948

Source of data: Produção Agrícola: 1948.

MAP 46

249 311 and Intermediate Hills between and around these zones, but usually on an exceedingly small scale.

249 311 433 The yields calculated for 1948 were as follows:

Santo Amaro	65.7	tons per	hectare
São Francisco	80.0	" "	"
São Sebastião	41.2	" "	"
Cachoeira	37.0	" "	"
São Filipe	50.0	" "	"

These may be compared with 38.7 tons per hectare for Brasil as a whole, 35.0 tons per hectare for Cuba, and 89.3 tons per hectare for Java and Madura for the same year. 249 433 134 257 The relatively low yields of Cachoeira and São Filipe are to be explained, at least in part, by the primitive character of cultivation and processing in these more remote areas. São Sebastião is a sort of frontier zone into which the big sugar mills are expanding their operations at the expense of smaller operators, but the methods of production are still less efficient than in the main production area, and the soils are sandier and less fertile. In Santo Amaro, yields are higher on account of generally better soils and techniques, but the demands of the large usinas require intensive and continuous cultivation on even the poorer soils. On the other hand, the less intensive cultivation in São Francisco, where the mills are smaller, allows a freer selection of soils, so that the yields of this area are the highest in the Recôncavo.

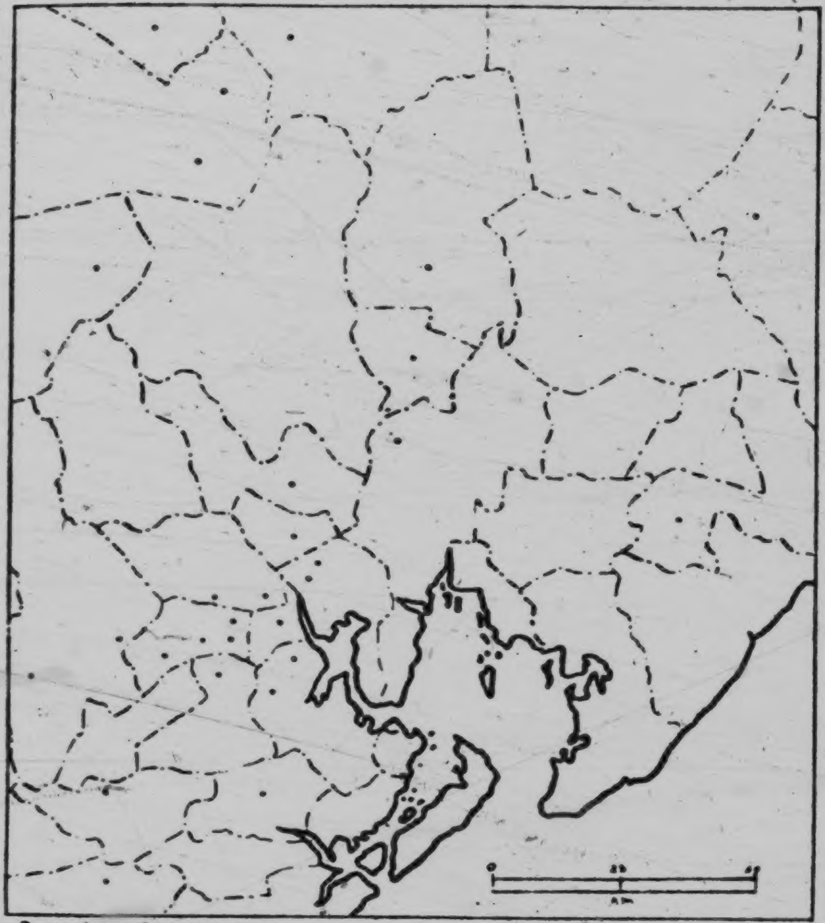
244 311 Sweet Potatoes and Peanuts. Two other American domesticates are grown in the Recôncavo, though on a small scale--peanuts and sweet potatoes. Both are cultivated primarily along the forest and scrub forest transition as auxiliary subsistence crops, in conjunction with manioc and tobacco. There are also scattered plots of these crops in most other parts of the Recôncavo. Neither crop occupied over 1 per cent of the total crop land of the region.

BB 244 The total area in sweet potatoes in 1948 was 344 hectares, the
311 total production, 2,565 tons. No single *município* grew more than 100
433 hectares nor produced over 1,000 tons (Maps 47 and 48). In Cachoeira
and Maragogipe, 3 per cent of the total cropland was in sweet potatoes
BB in 1948. The plants are grown on the slopes and in the sandier valley
[438] bottoms of the Intermediate Hills and are sold through the local markets.
On a smaller scale, sweet potatoes are grown as a minor supplementary
crop in the Southwestern Recôncavo. The mean Recôncavo yield was 7.5
tons per hectare, close to the mean Brazilian 1948-1950 yield of 8 tons
per hectare. Sweet potatoes are grown in the Recôncavo both as "garden"
crops for home consumption and as minor commercial crops for local
exchange.

The total area in peanuts in 1948 was 550 hectares; the total production was 876 tons (Maps 49 and 50). There is some small commercial production in Maragogipe and in the Northern Recôncavo; in the former, 6 per cent of the total cropland was in peanuts in 1948, and in the latter, from 2 to 5 per cent. Yields calculated for *municípios* varied from .3 to 3.5 tons per hectare without discernible pattern. The mean yield was 1.6 tons per hectare, higher than the .97 tons per hectare of Brazil and the .89 tons per hectare of the United States.

BB *Bananas*. The banana is the sole important subsistence crop of
245 the Recôncavo which is of old world origin. Brazil is the world's
433 leading producer of bananas, and the main centers of production are
B [245] [433] in Rio de Janeiro, São Paulo, and Minas Gerais. In the Recôncavo,
bananas are grown primarily for subsistence and local exchange, but
there are a few small commercial growers. Under the existing system
BB [489] of transportation, the long distance shipment of so bulky, heavy,
perishable, and cheap a product is difficult.

*102
244
• 311



Each dot = 25 hectares

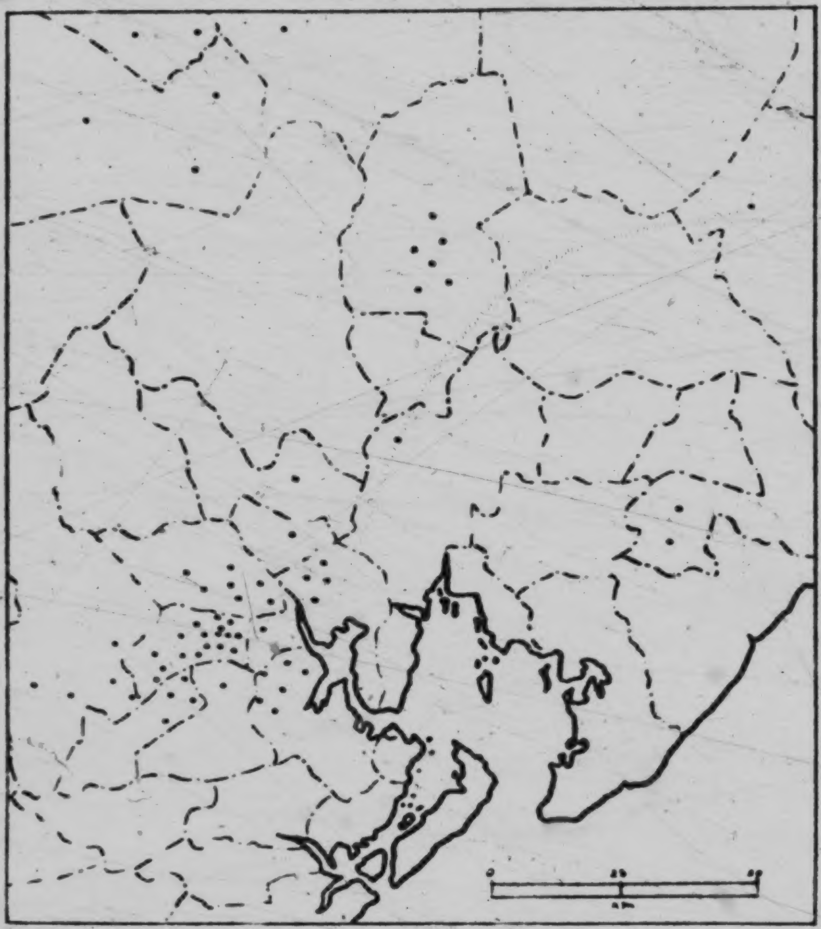
RECONCAVO OF BAHIA

Area in Sweet Potatoes--1948

Source of data: Produção Agrícola: 1948.

MAP 47

*402
244
• 311
433



Each dot = 50 metric tons

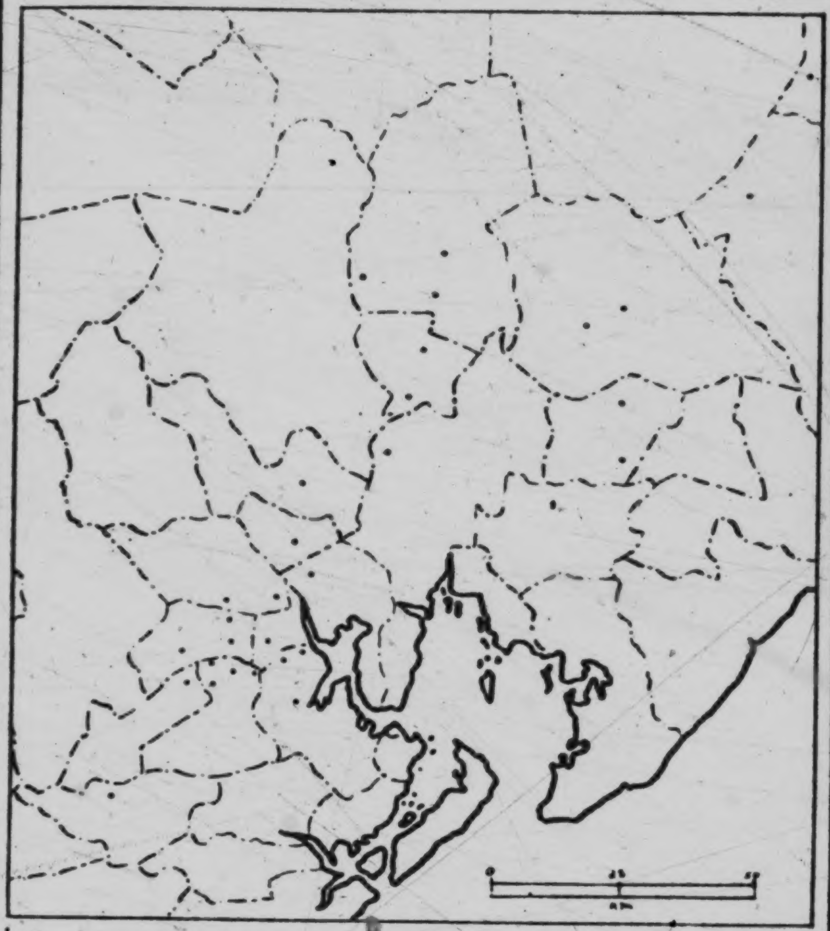
RECONCAVO OF BAHIA

Production of Sweet Potatoes—1948

Source of data: Produção Agrícola: 1948.

MAP 18

*102
244
• 311



Each dot = 25 hectares

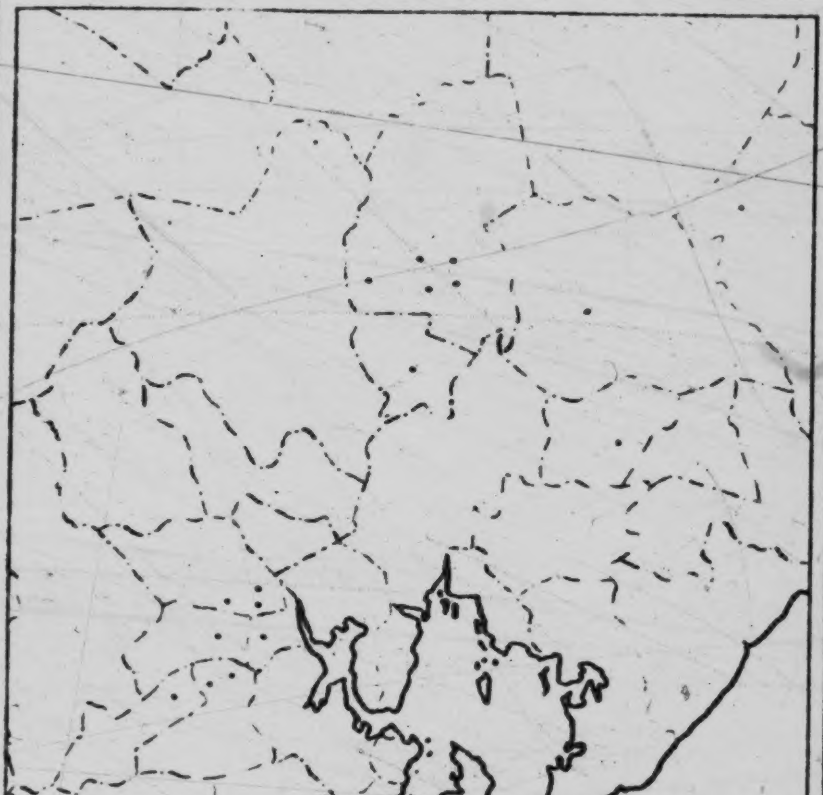
RECÔNCAVO OF BAHIA

Area in Peanuts--1948

Source of data: Produção Agrícola: 1948.

MAP 49

*402
244
• 311
433



Each dot - 50,000 kilograms

RECONCAVO OF BAHIA

Production of Peanuts--1948

Source of data: Produção Agrícola: 1948.

MAP 50

245 The bananas of the Recôncavo include a number of types--large, medium and small eating varieties, and plantains--which are grown in most sections and which may be encountered in village and urban markets in all seasons. Cultivation is a haphazard enterprise in which the reproduction of bananas frequently is accidental rather than deliberate. Since there is so much semi-spontaneous cultivation concealed in gardens and second growth and thus probably not enumerated and since the spacing of the plants is so variable, area data for bananas in the
[311] Recôncavo have little meaning. The official data for 1948 indicated that
[433] there were 1,069 hectares planted in the region, producing an estimated 1,859 bunches.[25]

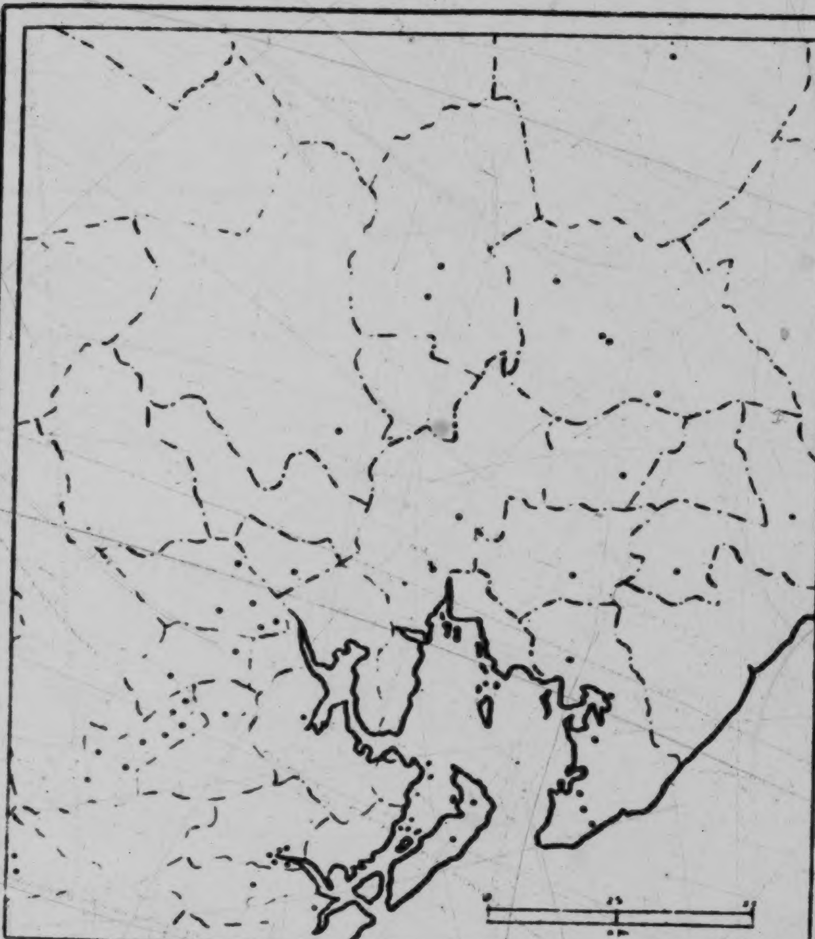
245 Banana plants are seen in all settlements of the Recôncavo, and
311 except in the drier caatinga zone of the Northwestern Recôncavo, scattered over the countryside (Map 51). The chief area of production is in the Southwest, where they are grown almost exclusively for the local market (Map 52). However, there is a concentration of banana production
[505]
[438] around the fringes of Salvador[26] and along the margins of the Bay and the estuary of the Paraguaçu, where sailing craft (saveiros) can conveniently pick up shipments for the large urban market.

245 In 1948 bananas had their greatest relative importance, as deter-
311 mined by the per cent of the total cropland which they occupied,
433 around and in the city of Salvador, on the island of Itaparica, and around the city of Alagoinhas. The mean yield of bananas in the Recôncavo was 1,730 bunches per hectare, or an estimated 13,840 kilograms per hectare (Map 53)--lower than the 28,900 kilograms per hectare of Brazil, but much higher than the 9,900 kilograms for French West Africa and the 4,400 kilograms for the Philippines.[27]

245 It should be emphasized that the banana in Bahia is a relatively
262 cheap and common subsistence food, eaten raw or cooked. This is not to

[TEXT CONTINUED ON PAGE 206]

*102
245
• 311



Each dot = 25 hectares

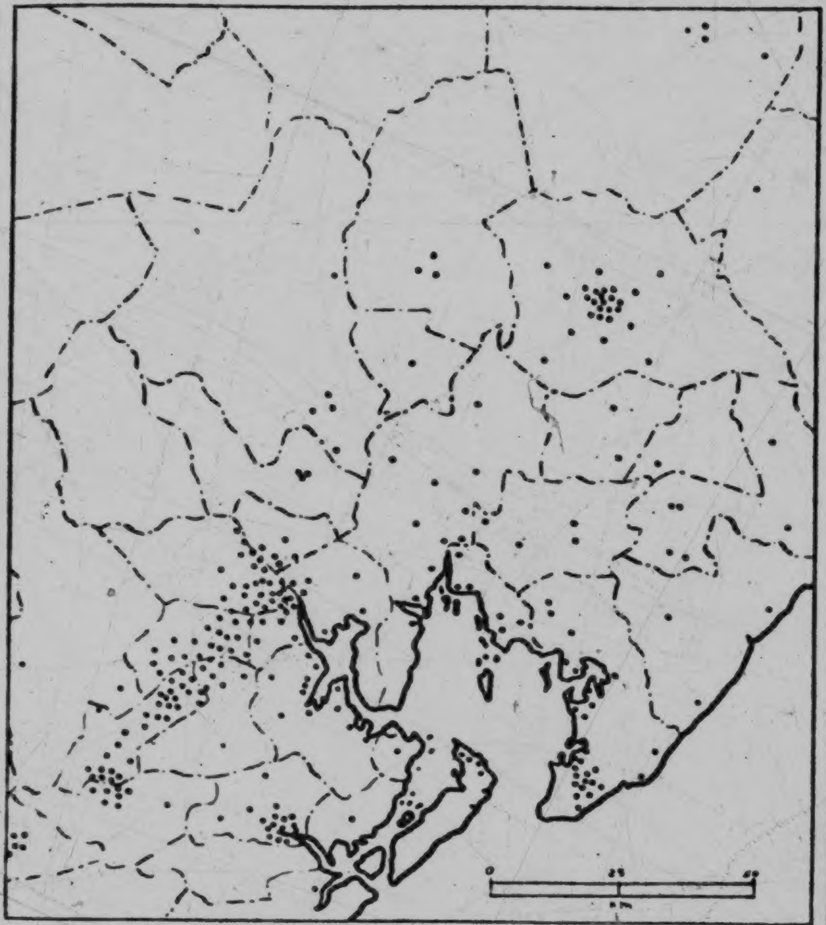
RECÔNCAVO OF BAHIA

Area in Bananas--1948

Source of data: *Produção Agrícola: 1948.*

MAP 51

402
245
• 311
433



Each dot = 10,000 bunches

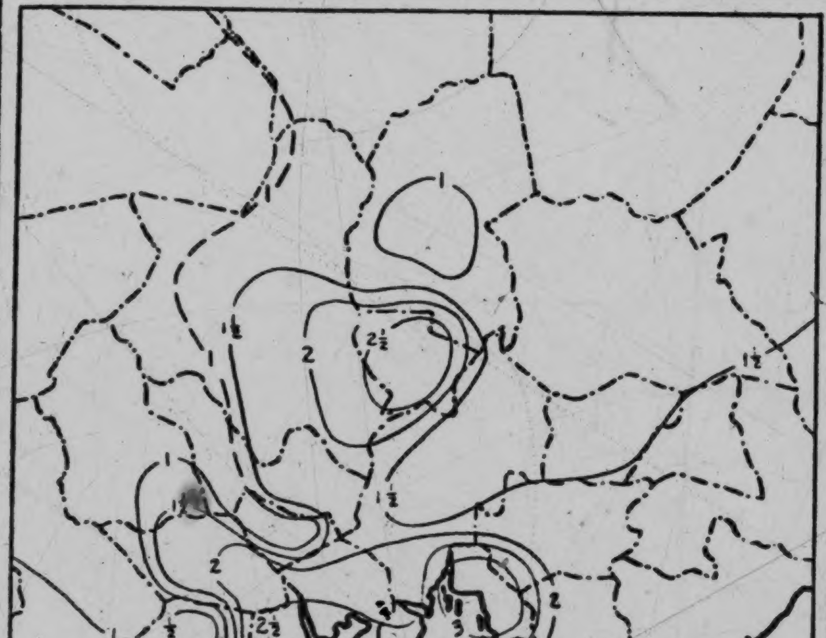
RECONCAVO OF BAHIA

Production of Bananas--1948

Source data modified from Produção Agricola: 1948.

MAP 52

*102
245
•'311
433



RECÔNCAVO OF BAHIA

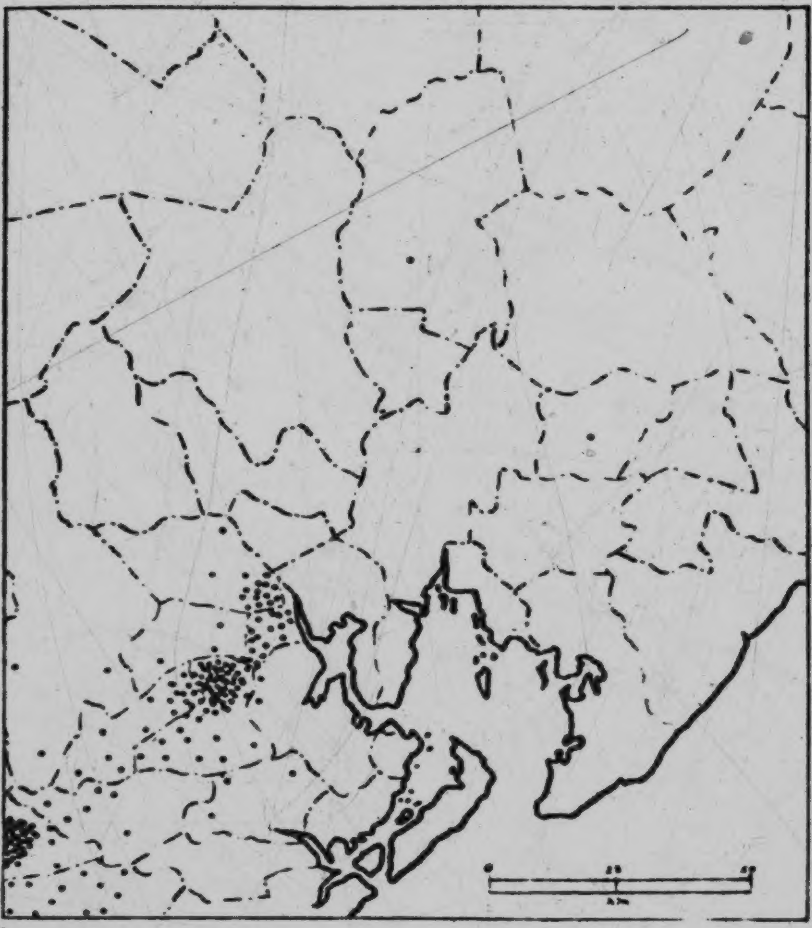
Yield of Bananas--1948

Thousands per Hectare

Source of data: Produção Agrícola: 1948.

MAP 53

*102
245
● 311



Each dot = 25 hectares

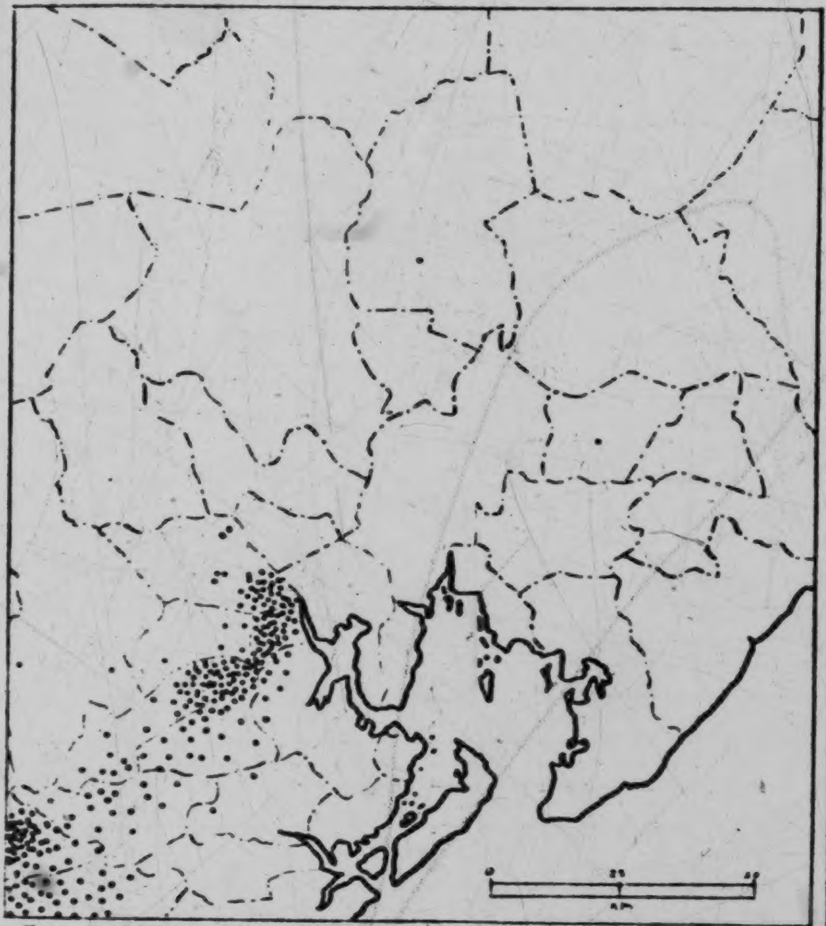
RECONCAVO OF BAHIA

Area in Coffee—1948

Source of data: Produção Agrícola: 1948.

MAP 54

*102
245
• 311
433



Each dot - 5,000 kilograms

RECÔNCAVO OF BAHIA

Production of Coffee--1948

Source of data: Produção Agrícola: 1948.

MAP 55

BB 245 262 say that it is within the reach of all, for there are many who subsist virtually on farinha de mandioca (manioc flour) and a few beans.

B BB 245 433 Coffee. Coffee is not as venerable a crop in Bahia, or in Brazil, as either sugar cane or tobacco; nevertheless, it is one of the traditional major crops. Bahia is by no means an outstanding producer within Brazil, for the main centers of production are in the Central-South--Paraná, São Paulo, Minas Gerais, and Espírito Santo.

BB 245 433 Although Bahia as a whole has an exportable surplus of coffee, the Recôncavo crop is primarily, if not exclusively, for local consumption. Indeed, if the per capita coffee consumption of the Recôncavo is equal to that of the state, a reasonable assumption, the region as a whole produces only about one-sixth or one-seventh of its coffee needs. Under these circumstances, coffee is used, except in a few areas, in the same município in which it is grown.

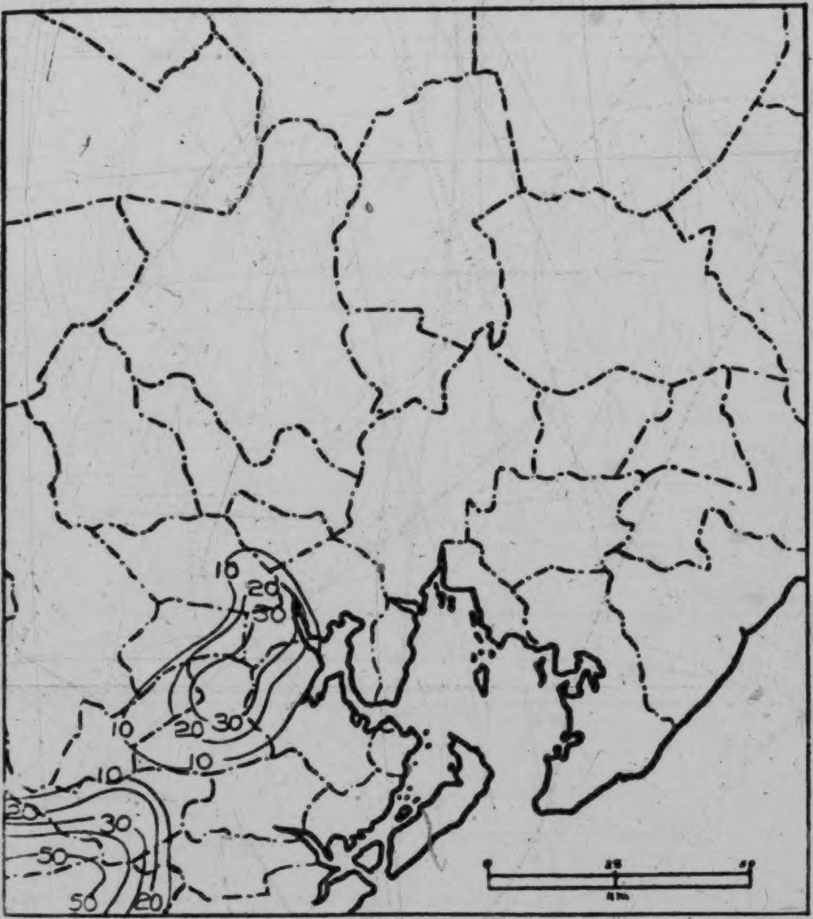
BB 245 311 433 In 1948 only four municípios in the Recôncavo had 400 hectares or more in coffee or produced over 100,000 kilograms of coffee beans (Maps 54 and 55). The chief coffee município was São Filipe, which led in acreage and in production.[28] For all practical purposes, coffee production is limited to the south side of the Rio Paraguaçu.

Coffee production in Bahia is closely associated with the more humid section of the crystalline zone, and especially the area southwest of the Recôncavo where there are low, rugged mountains and consequently areas of greater elevation and precipitation. This "coffee zone" is extended into the Recôncavo along the rougher, more humid edge of the Crystalline Uplands and the adjacent Intermediate Hills, i.e., in São Filipe and São Felix.

BB 245 311 Only 4 per cent of the cropland of the Recôncavo as a whole was in coffee in 1948, but in São Félix and northern São Filipe the

[TEXT CONTINUED ON PAGE 209]

*102
245
• 311


10
20
30
10
20
30
10
10
30
30
50
50
20

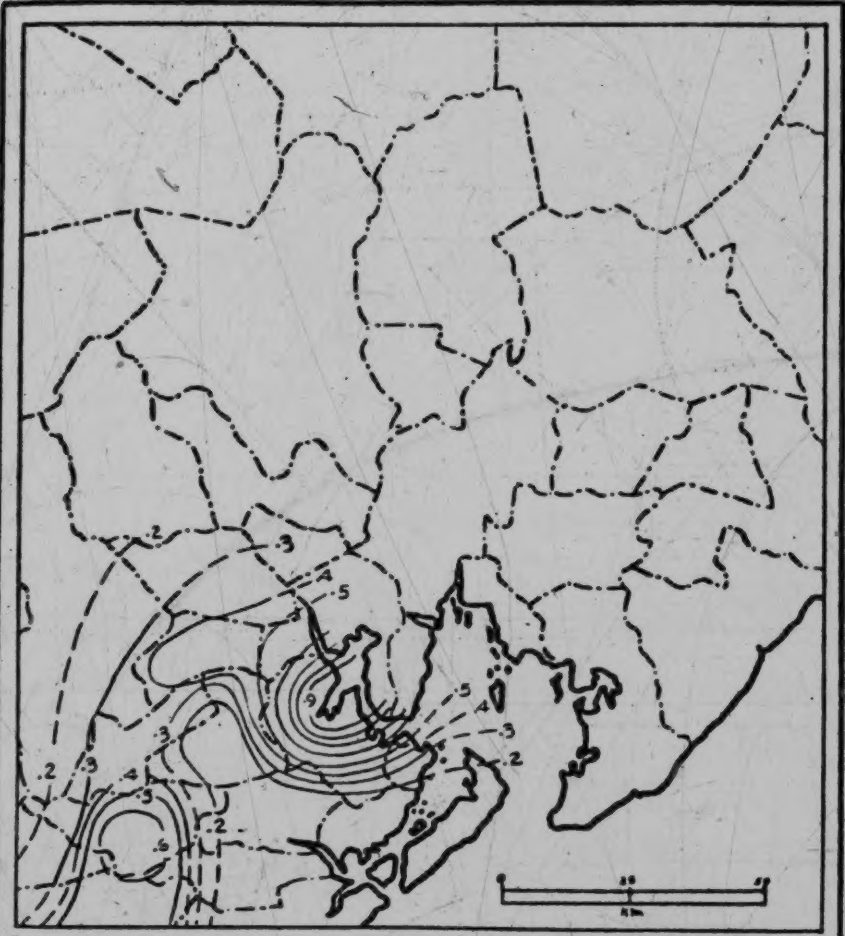
RECÔNCAVO OF BAHIA

Per cent of Cropland in Coffee--1948

Source of data: Produção Agrícola: 1948.

MAP 56

*102
245
• 311
433



RECÔNCAVO OF BAHIA

Yield of Coffee--1948

Tons per Hectare

Source of data: Produção Agrícola: 1948.

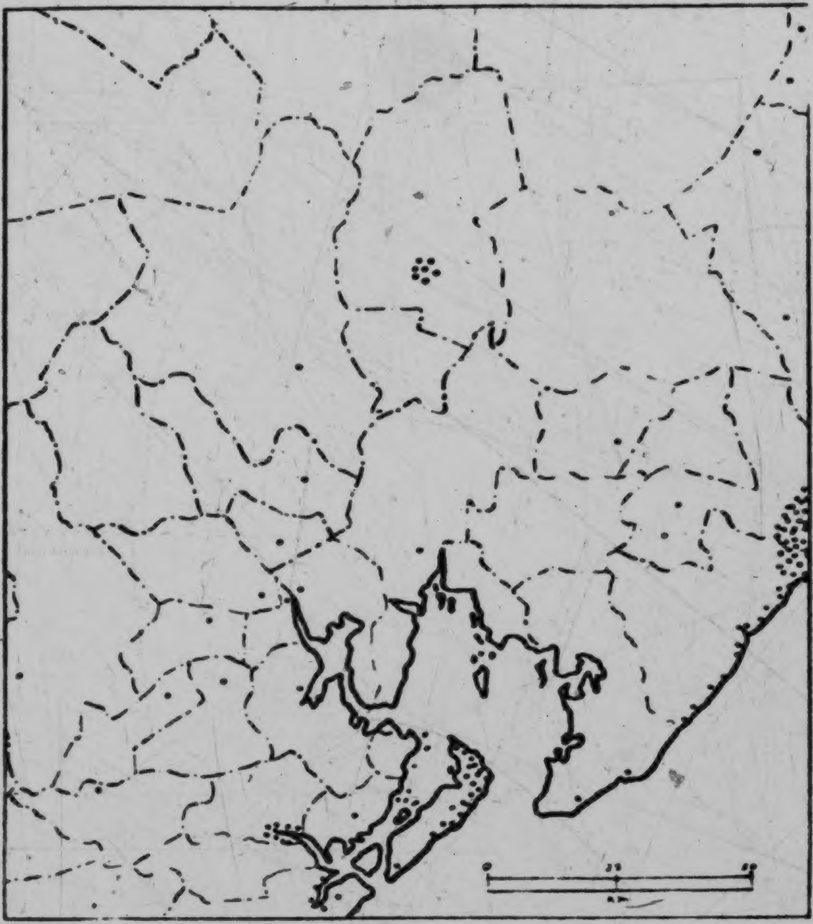
MAP 57

245 311 small coffee groves occupied as much as one-third of the total cultivated area (Map 56). In São Félix coffee was the second ranking crop in area of cultivation, in São Filipe, the third. The coffee cultivation in these municípios is concentrated along the eastern side of the tobacco-manioc area, on the rough Intermediate Hills. The slope-land [134] [132] soils are relatively fertile; yet there is not too much precipitation for the harvesting and drying of the beans.

Although coffee production in the "coffee zone" beyond the Recôncavo is on a moderately large scale, within the Southwestern Recôncavo coffee is planted in very small, irregular plots. The coffee is shade-grown, usually under a remnant of old mata or under jackfruit and similar trees. Except in São Filipe and São Félix, it is generally cultivated as an auxiliary rather than as a principal crop. The harvest is non-selective, and the entire bush is stripped at one time. 245 311 433 The beans produced under this system are of low quality compared with the selected beans of the Spanish-American highlands, but the people of Bahia claim that their coffee has a special flavor. The mean yield of coffee in the Recôncavo in 1948 was about 300 kilograms per hectare, compared to over 400 kilograms per hectare for Brazil. The main centers of production had yields near the mean of 300 kilograms per hectare, except for São Filipe which produced less than 200 kilograms per hectare (Map 57). Yields, as derived from the official data, were highly variable among the minor producers.

245 Coconut. In a sense the coconut is, like coffee, an alien intrusion into the Recôncavo. Although Bahia is by far the leading producer of coconuts in Brazil—they are called côcos da Bahia—the main centers of production are on the coast north and, to a lesser extent, south of the Recôncavo.

*102
245
• 311



Each dot • 25 hectares

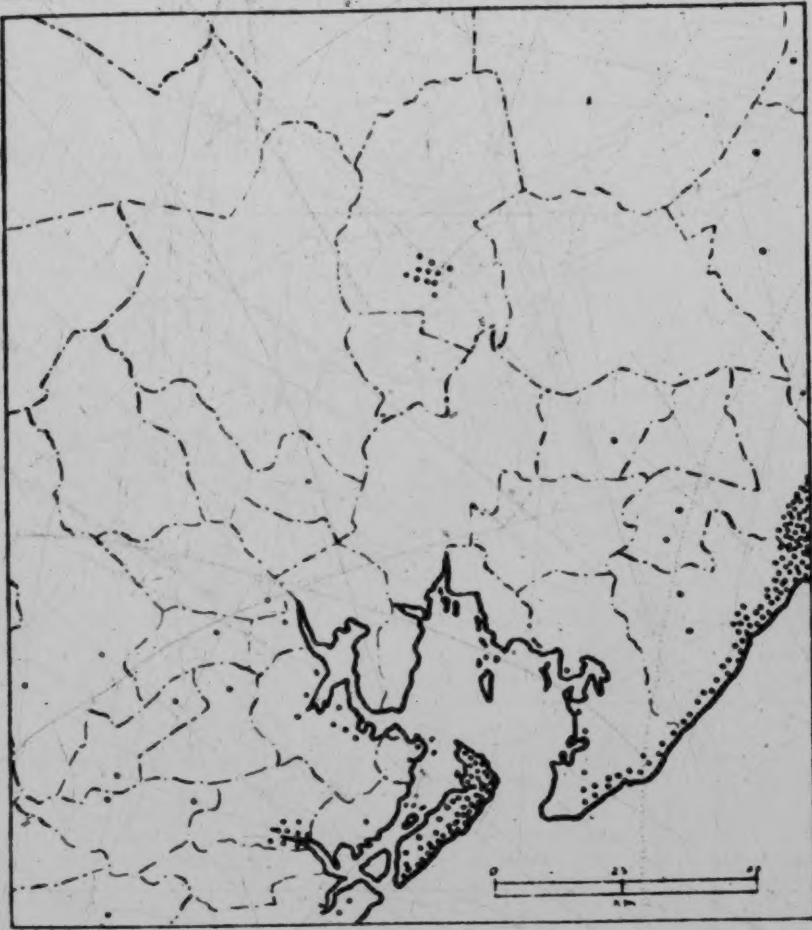
RECÔNCAVO OF BAHIA

Area in Coconuts—1948

Source of data: Produção Agrícola: 1948.

Map 58

*102
245
• 311
433



Each dot = 50,000 coconuts

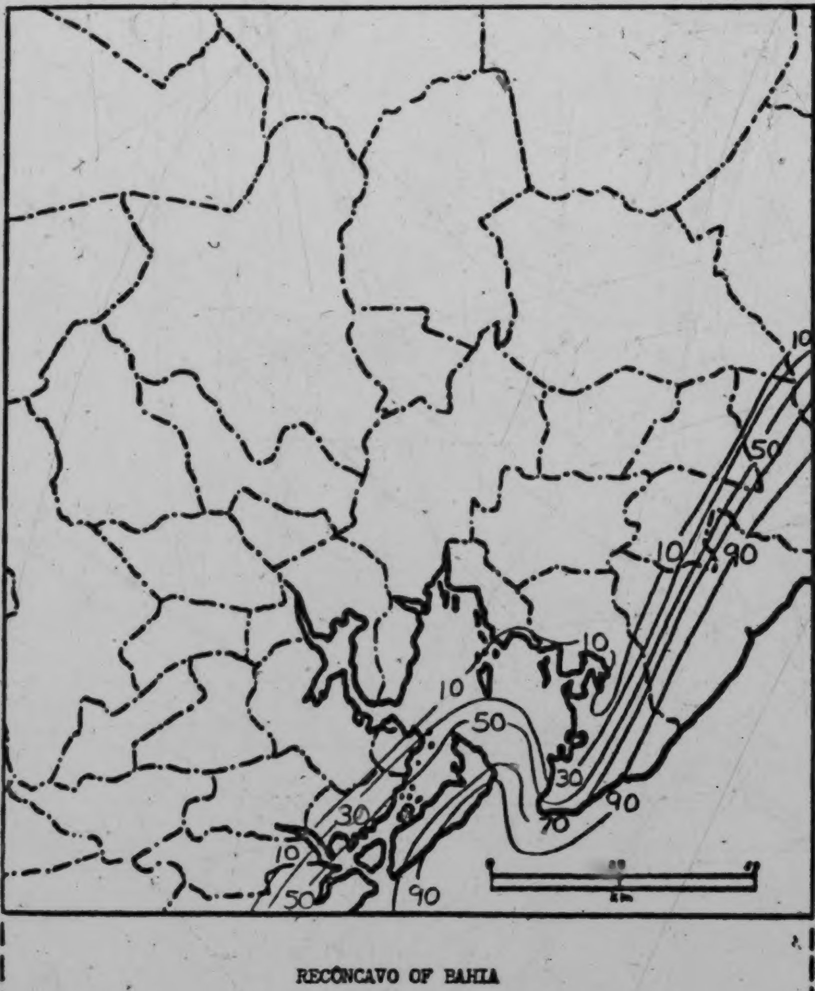
RECONCAVO OF BAHIA

Production of Coconuts--1948

Source of data: Produção Agrícola: 1948.

MAP 59

*102
245
•311


10
50
10
90
10
10
50
30
90
70
30
10
50
90

RECÔNCAVO OF BAHIA

Per cent of Cropland in Coconuts—1948

Source of data: Produção Agrícola: 1948.

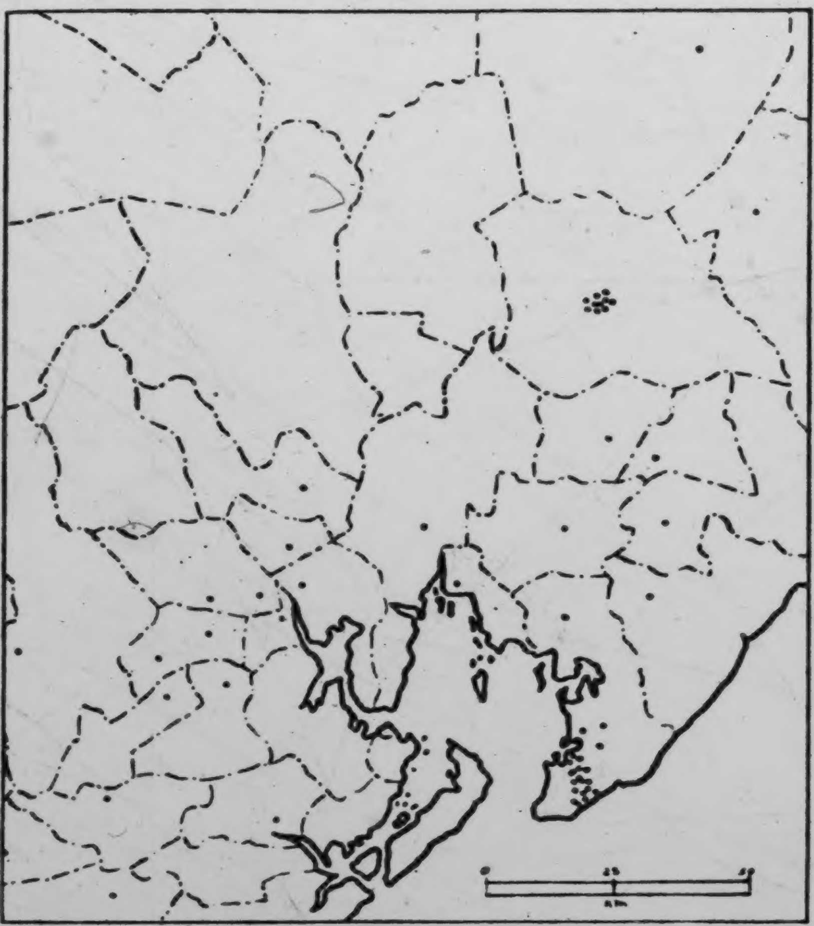
MAP 60

245
311 Within the Recôncavo coconut production is important along the
sandy beach line of the island of Itaparica and along the ocean coast
of Salvador, where coconuts are virtually the only agricultural product
[133] (Maps 58, 59, and 60). The inner shores of the Bay, which rise abruptly
[134] with rocky clay slopes, bear very few coconuts, except in a low-lying
sandy zone along the estuary of the Paraguaçu. Coconuts are produced
245
[423] chiefly on large properties which are frequently owned by urban families.
[464] The plantations are operated with hired labor drawn from the coastal
[438] population. When harvested, the coconuts are sold in the urban markets
[258] of Salvador and other cities and towns. Very little of the Recôncavo
[439] production is converted into oil, and little is exported.

Oranges. The navel orange is a Bahian development, a mutation
[433] of the orange brought from Europe. The main centers of Brazilian production, however, are elsewhere in the country, and cultivation of oranges
within the Recôncavo is primarily for local consumption.

245 Scattered orange trees are a feature of the rural and urban
311 landscape in many areas. In addition to this generalized cultivation,
which frequently is not shown in the official data, there is commercial
production in the environs of several urban centers—Alagoinhas, Santo
Antônio, and to a lesser extent, Salvador (Maps 61 and 62). The
[489] cidades of Alagoinhas and Santo Antônio are both markets for part of
[443] the local crop; moreover, both are on the railroads leading to Salvador,
which is the chief market for the entire region. In addition to these
three main concentrations, there are numerous orange groves in the
Southwestern Recôncavo which apparently serve both local and regional
markets, though on a small scale. In general the relative area in
orange groves is not great, yet in 1948 they occupied 10 per cent of
the cropland of Alagoinhas.

*702
245
• 311



Each dot = 25 hectares

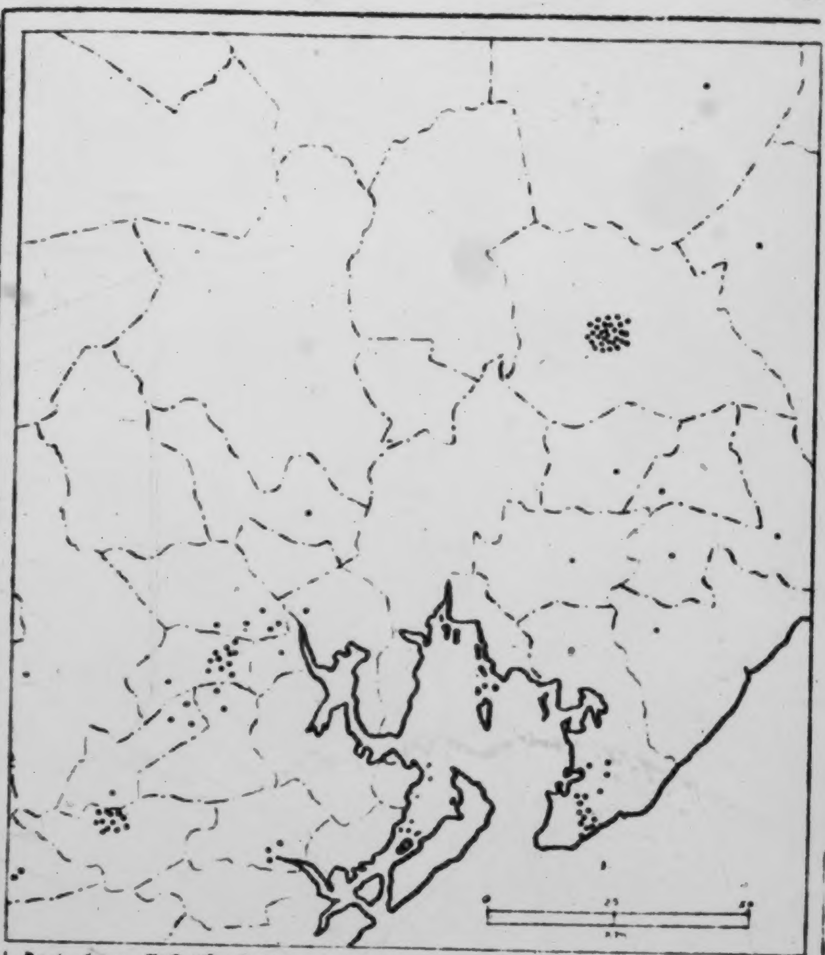
RECONCAVO OF BAHIA

Area in Oranges--1948

Source of data: Produção Agrícola: 1948.

MAP 61

*102
245
● 311
433



Each dot = 500,000 fruits

RECÔNCAVO OF BAHIA

Production of Oranges--1948

Source of data: Produção Agrícola: 1948.

MAP 62

245 Oranges, like coconuts, are usually grown on plantations. The
438
[471] capital investment in tree crops is usually too great for small cultivators. Moreover, as a highly perishable crop, oranges require more or less direct marketing, which is frequently beyond the capacity of the small grower. If oranges were marketed by trickling from the small grower through the hands of merchants, buyers, and the like, as is tobacco, they would be spoiled long before reaching the consumer. The small cultivator can market his handful of oranges only in the local market.

241 Supplementary Crops. Although the official data show only a
433 very limited distribution of minor supplementary crops, their cultivation is not confined to those municípios where exceptionally conscientious
[262] statistical agents have made detailed records. The common vegetables--green beans, onions, garlic, and tomatoes--are cultivated in small quantities in all parts of the Recôncavo and are a traditional part of Bahian dishes. Around the cities and towns there is some specialization
[443] in vegetable farming, but there are no major concentrations. The Salvador market is supplied with produce from a broad rural zone which includes
[489] most of the Recôncavo. The produce is brought to the city by donkey, truck, or by sailing boat.

The most important of the supplementary commercial crops is
[134] pineapple, which is produced on the sandy soils of the Northern, and to a lesser extent, Southwestern Recôncavo. There is very scattered production of grapes, cotton, rice, and white potatoes, but there are no important centers of cultivation of these crops.

245 Minor Spontaneous Tree Crops. Mangoes are very common within
311 the houseyards of Salvador and throughout the humid Coastal Plain. In

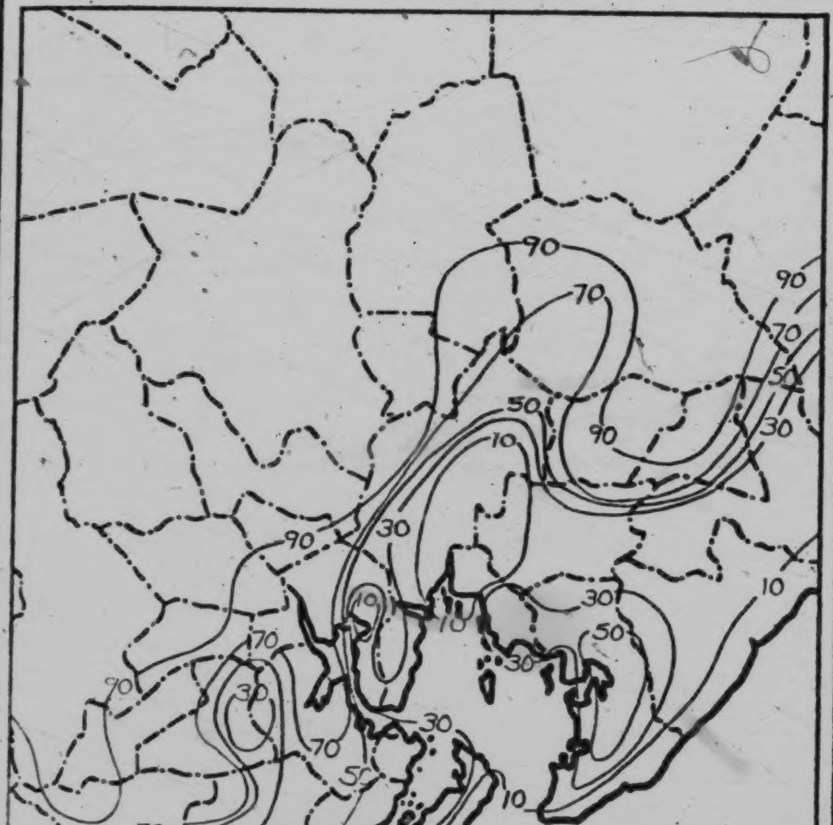
245 311 the peripheral areas of the region they are less common, but a few trees can be seen in almost every settlement. The cashew is more strictly confined to the littoral and especially to the sandy coastal zones behind the palm-laden beach line. Jackfruit and breadfruit are especially common in the eastern Crystalline Uplands. Scattered along roads and around houses, they provide shade for the yard or for coffee and an occasional fruit for sale in the local market. The African oil palm is encountered occasionally in most municípios of the Recôncavo, generally growing out of the wet valley floors. There are many oil palms on the island of Itaparica, but the only major area of commercial production
[258] [438] in Bahia is on the coast south of the Recôncavo. The oil is prepared by boiling the seed, and the surplus oil is sold in small quantities on the local market.

241 311 Annual and Perennial Crops. Six of the major crops of the Recôncavo are cultivated as annuals--manioc, corn, beans, peanuts, sweet potatoes, and tobacco.[29] The major perennials are bananas, sugar cane, coffee, oranges, and coconuts. Over three-fourths of the cropland of the Recôncavo was in annuals in 1948 and about 22 per cent in perennials--including both tree and field crops. In the Recôncavo there is a very close connection between crop periodicity and land systems. The annual crops are produced almost exclusively under a system of land rotation, while the perennials are grown under a system of permanent cultivation. The zones of animals are generally mixed-crop zones, while the perennials are usually monocultural.

The main concentrations of annuals are on the uplands of the Northern, Northwestern, and Southwestern Recôncavo—the domain of manioc, tobacco, corn, and beans (Map 63). Perennials dominate the Intermediate Hills and the coastal lowlands—coconut palms on the beaches, sugar

[TEXT CONTINUED ON PAGE 219]

*402
241
•311


90
70
90
70
50
50
10
90
30
30
90
10
10
30
10
70
30
50
90
30
30
70
50
10
70
50
30
50
30
10
Km

RECONCAVO OF BAHIA

Per cent of Cropland in Annual Cultivation—1948

MAP 63

241 311 cane in the pockets of Coastal Plain, and coffee and sugar cane in eastern and southern São Filipe. Annuals, chiefly manioc, intrude into the lowlands and hills in two areas: west of the Bay, from Maragogipe to Nazaré; and east of the Bay, in the município of Salvador.

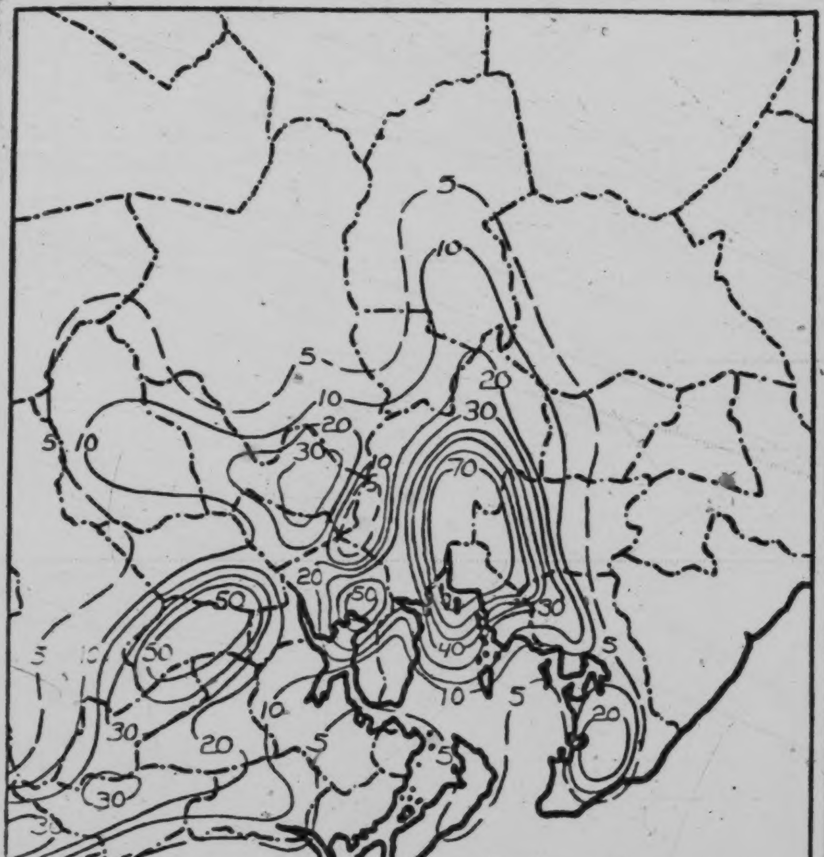
General Distribution of Cropland. The total cropland of the Recôncavo in 1948, based upon the sum of the areas of the individual crops, was about 80,000 hectares--6.4 per cent of the land surface of the region. This proportion compares favorably with the one per cent of the state of Bahia and the two per cent of Brazil which is cultivated. However, a comparison with areas of the same general character in the Northeast of Brazil is more appropriate and more unfavorable; in 1948 both Paraíba and Alagoas had ten per cent of their areas under cultivation in principal crops.[30]

249 311 The most intensive center of cultivation in the Recôncavo is the area of sugar cane production north of the Bay. If the land which is in fallow one year out of every five is added to the area of the cane fields, about 75 per cent of the total land surface of the area was included in the closed circle of cultivation and fallow in 1948. The smaller area of sugar cane cultivation at the head of the Bacia do Iguape had a similar, though less intensive, concentration of cultivated land.

249 244 311 In the Southwestern Recôncavo as much as one half of the total area was in crops in 1948. Most of this land, as has been seen, was in tobacco or manioc. A smaller nucleus of intensive cultivation north of the Rio Paraguaçu centered on the município of São Gonçalo, was also an area of the cultivation of tobacco and manioc. The rest of the northern part of the Recôncavo in which these two crops were

[TEXT CONTINUED ON PAGE 221]

102
241
• 311


5
10
20
30
70
50
40
30
20
10
5
30
20
10
5
30
5
20
0
5

RECÔNCAVO OF BAHIA

Per cent of the Total Land Area in Cropland--1948

MAP 64

249 244 important had less intensive cultivation than the two principal centers
311 mentioned above.

241 311 Most of the remaining crops of the Recôncavo were either minor subsistence crops of general distribution, not of themselves accounting for any strong concentration of cropland, or were major crops produced in small separated centers of intensive cultivation. The Northwestern Recôncavo corn and bean areas, the coconut plantations of the beach line, the Southwestern Recôncavo sugar cane and coffee areas, and the suburban rings of orange production were zones where the mean intensity of cropland was low or, at best, modest.

There were two zones of very low intensity of cropland which have not been discussed previously because they did not have significant concentrations of individual crops. The belt of Intermediate Hills around
[137] [231] the Central Recôncavo sugar cane area is largely forested, the scene of very scattered cultivation, livestock enterprises, and extractive industries. This belt was used, as will be seen, to provide fuel and to maintain a livestock reserve for the adjoining sugar cane area. The forested belt between the beach line and the inland areas of sugar cane and tobacco cultivation were used primarily for extensive systems of cultivation and for the small scale production of livestock. Only around the perimeter of Salvador was this forested belt intensively used, for in this area there were orange groves, manioc gardens, and a few very small truck farms.

241 311 178 (161) (434) Expansion of Cropland. There can be little question but that the Recôncavo as a whole was an area of expanding cropland in the 1940's.[31] In no other way could the increased food necessary for the growing population be supplied, for there were not then nor are there now external sources for large quantities of staples, excepting only livestock. There

241 are many local signs of the increase in cultivation—expanding rural
311 settlement, overcrowded market facilities, and stories of the "old days"
178 when life was more leisurely and the land problem less severe.
[361] Two areas of the Recôncavo are in great contrast as far as the trend of land use is concerned—the Central Recôncavo on the one hand and the
249 outer Recôncavo, especially the Southwest, on the other. As a result of
311 the stabilization of the sugar industry by the Instituto do Açúcar e do
178 Álcool and, undoubtedly, of the high fixed costs of the sugar industry,
[654] the area under cultivation in the Central Recôncavo has remained rela-
[656] tively constant. Indeed, since large-scale speculation in the cultivation of cane is no longer feasible, as a result of government control, it is possible that marginal lands have been withdrawn from cultivation or have been converted to other uses. However, the evidence of the present land use pattern, at least in the area north of the Bay, is against this hypothesis--there are no signs of abandoned cane fields and no extensive areas with any form of land use except those associated with the sugar industry. There are indications of the abandonment of cultivation near the lesser sugar cane area north of the Bacia do Iguape, but the state of the abandoned sugar mills suggest that the decline in cultivation took place before the last decade. In general, then, the area in cane probably was relatively stable during the 1940's and the 1950's, at least to 1953.

249 The situation in the areas of the cultivation of tobacco and
244 manioc is more complicated, in part because the economies of these crops
311
178 are not stabilized. The area in tobacco undoubtedly has fluctuated over a wide range from year to year, although the area in manioc probably has tended to change more steadily, since it is a basic food crop. There seems to be no question but that during the 1940's the area in

249 244 311 178 tobacco and manioc increased in the zones of intensive production of both crops. Particularly in the Southwestern Recôncavo does the expansion of settlement, the present critical intensity of land use, the florescence of tobacco cultivation during the early 1940's, soil exhaustion as evidenced by the declining yields, and the testimony of the people of the people of the area attest to the increase during these years. Detailed field investigation in Cruz das Almas, in the heart of the Southwestern Recôncavo, indicated that if the intensity of cultivation shown by the 1948 figure is correct, then the cropland has declined in the years since. In 1948, according to the data, one-half of the total area of the *município* was cultivated; in 1953 the total land in crops can scarcely have been more than one quarter of the total area, and there were several signs of decline. Although there was no mature second growth, there was a good deal of *capoéira de caatinga* and *capoéira de mata* (second growth) which was about one to three meters high, that is, from about two to six years old. Cruz das Almas seems to be the extreme case of a *município* which went through a period of rapid growth and precipitous decline in these years, but the same processes undoubtedly have taken place in many of the other *municípios* where tobacco was important. Probably none of these areas have returned to the 1940 level, because of the concomitant increase in the population and the fall in the productivity of the land in the years since.

241 311 178 There have apparently been major expansions of the cropland of two areas which border on the Recôncavo. Serrinha is known as a *município* of recent agricultural expansion.[32] The growth of the *cidade* of Serrinha in the last decade is a clear expression of greater agricultural production, although the new cropland is not in the vicinity of the city. Apparently the main expansion was around a group of low *serras* and

241 311 178 shallow lakes west of the cidade, along the border of Conceição do Coite, where intensive production of corn and beans on newly settled land could be observed in 1953.

The agricultural expansion in Santo Antônio and in Nazaré was more notable. Both of these municípios lie in a zone of continuing agricultural development which is contiguous with the Recôncavo and which shows signs of becoming an integral part of the region. If the criterion originally used to delimit the Recôncavo and define the area of intensive field investigation--over 20 per cent of the total area in agricultural use--were to be applied to the 1948 distribution of cropland, then Santo Antônio, though not Nazaré, would lie within the region. The current agricultural development of Santo Antônio, and to a lesser extent of Nazaré, is making these municípios progressively more like the Recôncavo.[33] The pattern of the production of tobacco and manioc in Santo Antônio is essentially the same as in the Southwestern Recôncavo. However, these two areas are still primarily oriented toward a zone along the Nazaré railroad, in which coffee and sugar cane, as well as tobacco and manioc, are important crops. For the moment, Nazaré and Santo Antônio are excluded from the Recôncavo, but with the explicit recognition of the possibility of new orientation.

CHAPTER VI

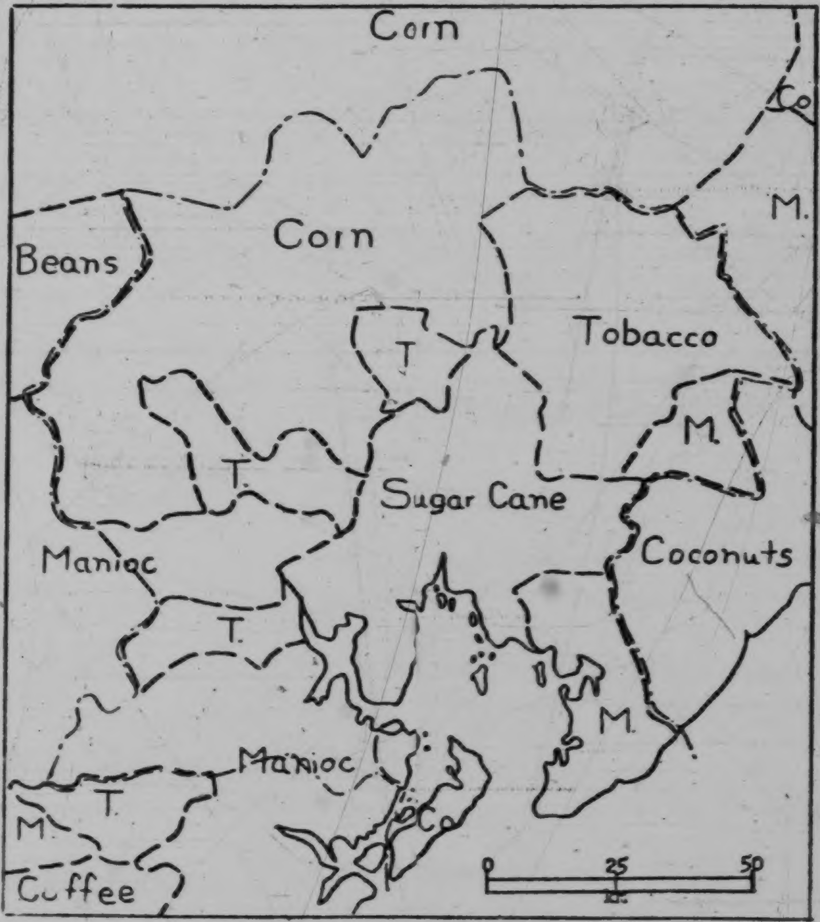
CROP REGIONS AND SYSTEMS

128 241 The discussion in the preceding sections has emphasized the analysis of the character and distribution of individual crops. As has been suggested, the Recôncavo has several specific crop associations, particularly manioc with tobacco and corn with beans, and several monocultural systems--sugar cane, coconuts, and coffee. The discussion which follows will deal with the crop associations and monocultures as areal and as functional groupings--a first step in the synthetic development of the sub-regional and regional patterns of agriculture in the Recôncavo. Since the município tends to be a highly integrated micro-region with a distinctive pattern of crops and cropland, the first level of generalization is this politically delimited local area. The summation of the crop pattern of the local area leads to the determination of the region in which crops are cultivated in isolation or in co-existence and in which co-existent crops are cultivated in interdependent crop systems.

128 241 311 Crop Ranks. In order to determine the areal importance of the principal crops in relation to each other, the crops of the several municípios of the Recôncavo and the adjoining regions were ranked in accordance with the amount of the cropland area which they occupied. The accompanying series of maps, based upon these rankings, reveal that more cropland was devoted to manioc (Map 65) than any other crop in seven municípios. 241/311 Tobacco occupied this position in six municípios, sugar cane in four municípios, corn in three, and coconuts in one. The relative area devoted to these five most cultivated crops varied from

[TEXT CONTINUED ON PAGE 230]

+102
241
•311


Corn
Co
M.
Corn
Beans
T
Tobacco
T.
Sugar Cane
M.
Manioc
Coconuts
T.
M.
Manioc
T.
Co
M.
Coffee
0
25
50

RECÔNCAVO OF BAHIA

Crops Ranking First in Area of Cultivation in 1948

M - Manioc
T - Tobacco
Co- Coconuts

MAP 65

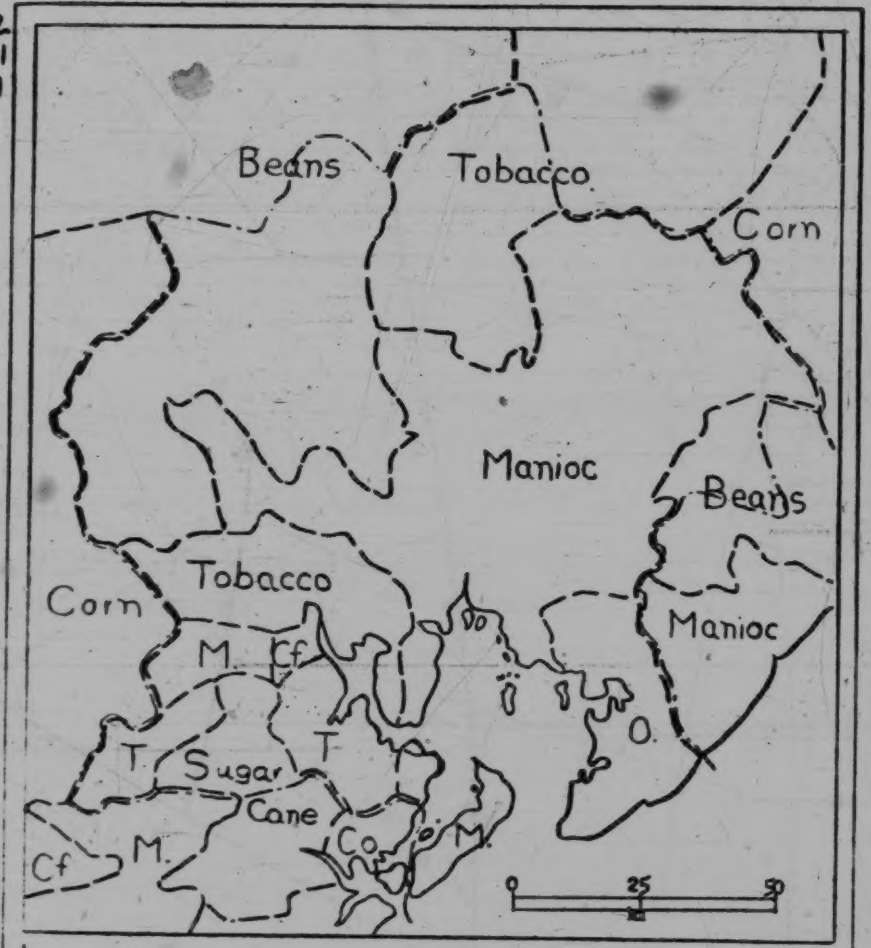
24| 96 per cent of the total cropland planted to sugar cane in São Sebastião
311 to 33 per cent of the total cropland occupied by manioc in São Filipe.

At least one-third of the cropland of every *município* of the Recôncavo and the adjoining areas was planted to a single crop, and in twelve *municípios* of the region, over half the total cropland was occupied by one crop. The leading crop of the Eastern, Northern, and Northwestern Recôncavo was either corn or tobacco, that of the Southwestern Recôncavo, either manioc or tobacco. Sugar cane ranked above other crops in the Central Recôncavo. In the Southern Recôncavo either manioc or coconuts occupied the greatest area of cropland.

The percentage of the cultivated land in the crop ranking second in area varied greatly from *município* to *município* (Map 66). In São Sebastião and Pojuca, in the Eastern Recôncavo, the crop which held second position occupied only 2 per cent and 4 per cent of the cropland, respectively. In Cruz das Almas the second crop in area occupied 42 per cent of the cultivated land. Manioc was the second crop in area in all *municípios* where tobacco was first except tiny São Félix. In the Northwestern Recôncavo, when corn was the first crop, beans or tobacco occupied the second position.

The pattern of the succeeding ranks shows the effect of specialization in cultivation: in five *municípios* of the Recôncavo and six *municípios* in the adjoining areas, the first two crops occupied 90 per cent or more of the cropland. Only nine Recôncavo and three adjoining *municípios* had a sixth ranking crop which occupied as much as 1 per cent of the total cultivated area, and in no *município* did the sixth crop occupy more than 4 per cent of the total cropland. The patterns of crops occupying third, fourth, fifth, and sixth ranks in area are shown on Maps 67, 68, 69, and 70.

*102
241
• 311


Beans
Tobacco
Corn
Manioc
Beans
Tobacco
Corn
Manioc
M.
Cf
T
Sugar
T
Cane
Co
M.
Cf
M.
O.
0
25
50
mi

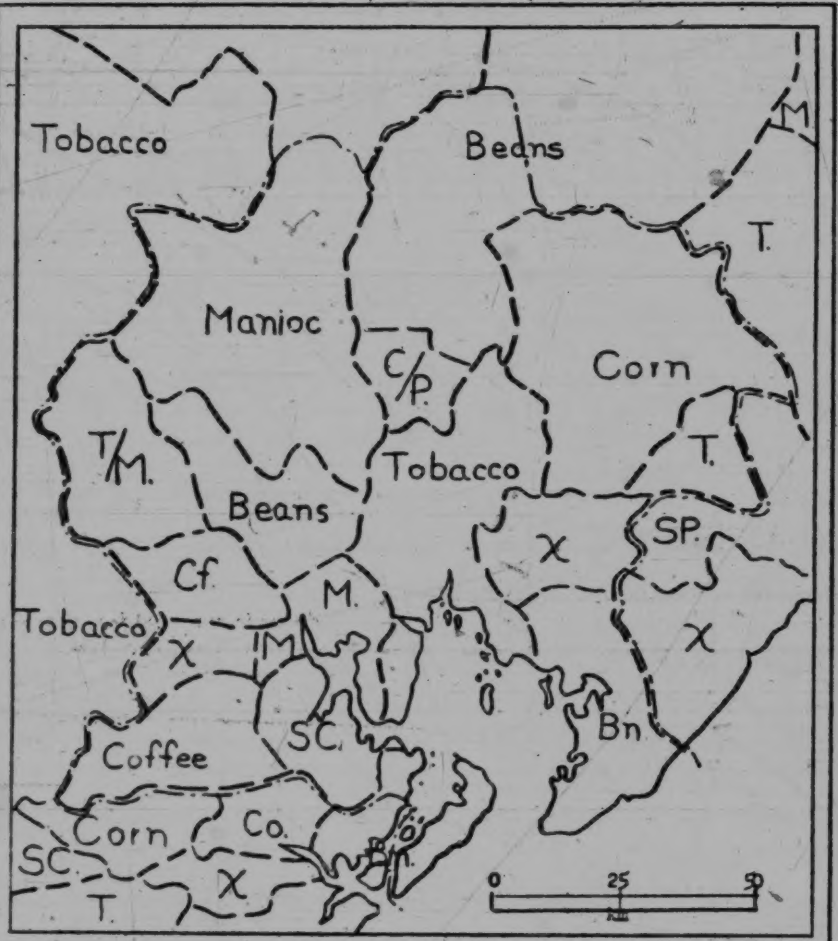
RECÔNCAVO OF BAHIA

Crops Ranking Second in Area of Cultivation in 1948

M - Manioc
T - Tobacco
Co- Coconuts
Cf- Coffee
O - Oranges

MAP 66

*102
241
• 311


Tobacco
Beans
M
T.
Manioc
Corn
C/P.
T/M.
Tobacco
T.
Beans
X
SP.
Cf.
M.
Tobacco
X
M
X
SC.
Bn
Coffee
Corn
Co.
SC
X
T.
0
25
50

RECÔNCAVO OF BAHIA.

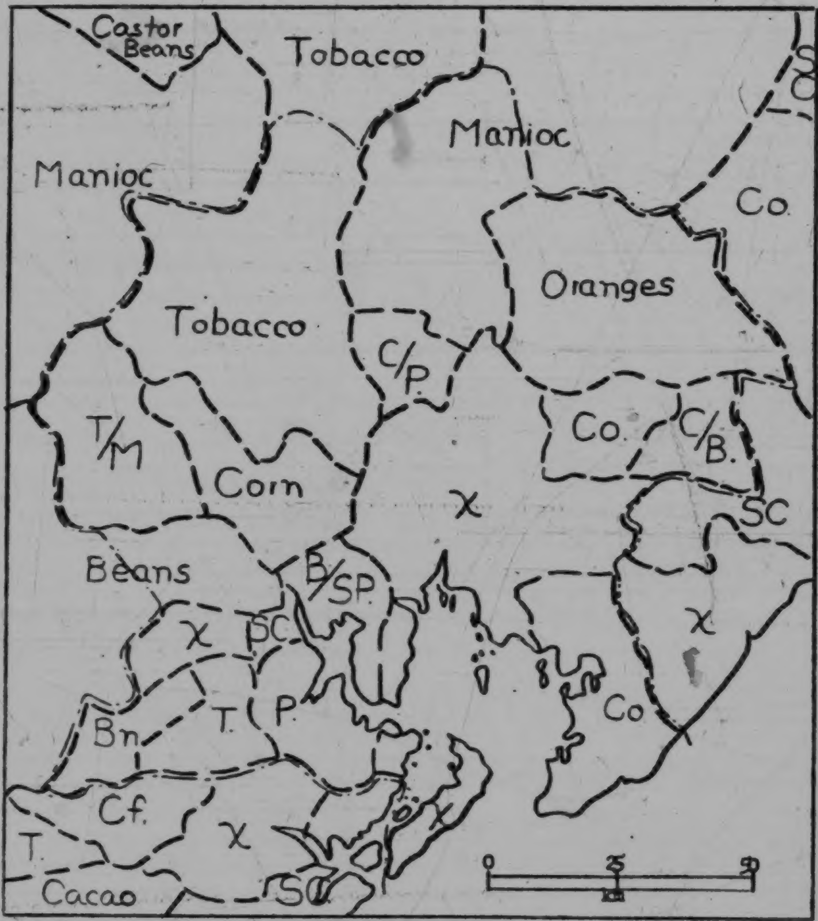
Crops Ranking Third in Area of Cultivation in 1948

M - Manioc
T - Tobacco
Co- Coconuts
Cf- Coffee
SC- Sugar Cane

SP- Sweet Potatoes
C - Corn
A/B-Two crops with same rank
x - No crop of this rank
with over 1 o/o of cropland

MAP 67

*102
241
311


Castor Beans
Tobacco
Manioc
Manioc
Co.
Oranges
Tobacco
C/P.
T/M
Corn
Co.
C/B.
T
SC
x
Beans
B/SP.
x
SC
x
T.
P.
Bn.
Co
Cf.
x
T.
Cacao
SC
0
25
50
Km

RECÔNCAVO OF BAHIA

Crops Ranking Fourth in Area of Cultivation in 1948

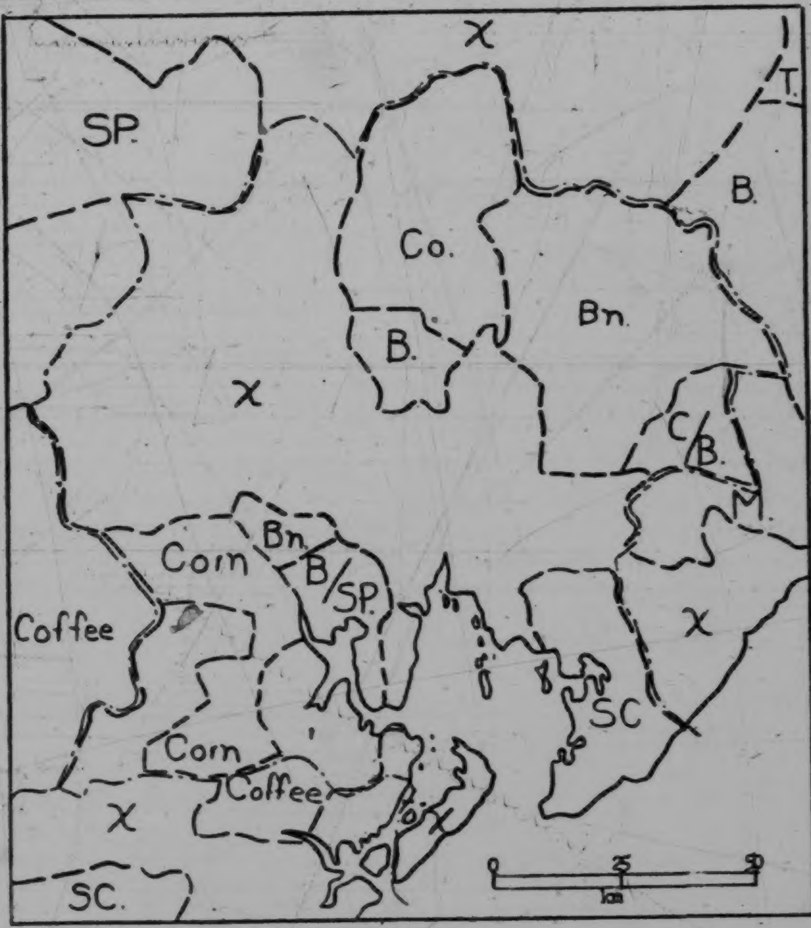
M - Manioc
T - Tobacco
Co- Coconuts
Cf- Coffee

SC- Sugar Cane
C - Corn
B - Beans
P - Peanuts

Bn- Bananas
SP- Sweet Potatoes
A/B-Two crops with same rank
x - No crop of this rank with over 1 o/o of cropland

MAP 68

*102
241
• 311


x
T.
SP.
Co.
B.
Bn.
B.
x
C/B.
M.
Bn
Corn
B/SP.
Coffee
x
SC
Corn
Coffee
x
SC.
0
25
50
km

RECONCAVO OF BAHIA

Crops Ranking Fifth in Area of Cultivation in 1948

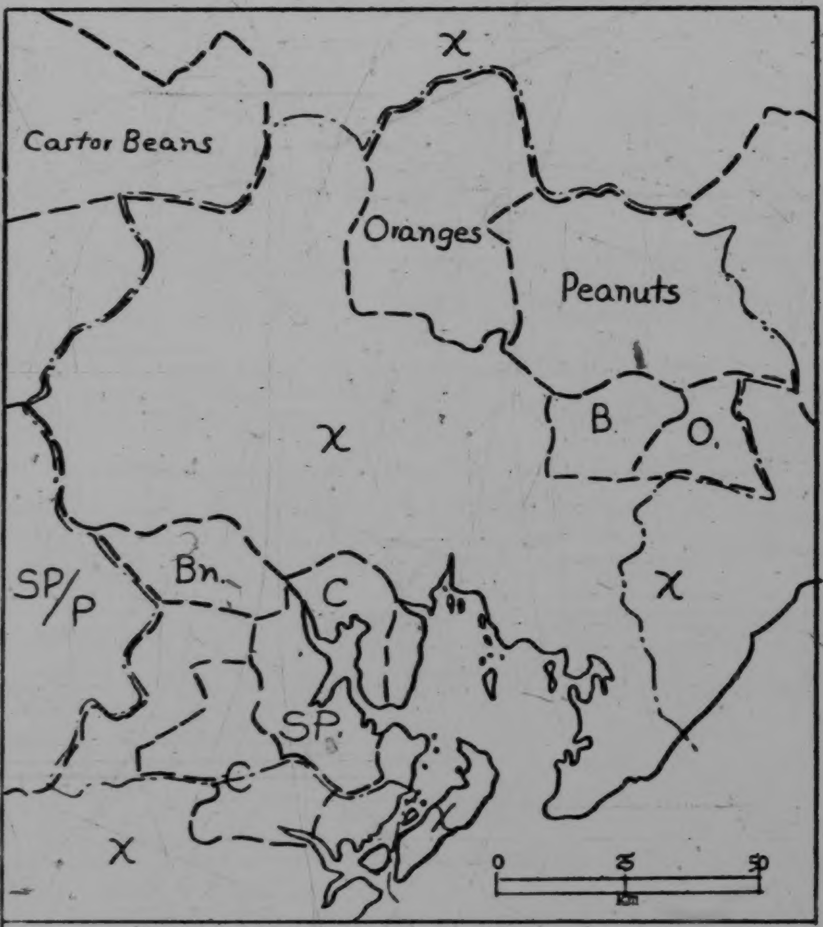
M - Manioc
T - Tobacco
Co- Coconuts
SC- Sugar Cane

C - Corn
B - Beans
Bn- Bananas
SP- Sweet Potatoes

A/B-Two crops with same area
x -No crop of this rank with over 1 o/o of cropland

MAP 69

*102
241
• 311


Castor Beans
x
Oranges
Peanuts
B.
O.
x
SP/P
Bn.
C
x
SP.
C
x
0
25
50
Km

RECÔNCAVO OF BAHIA

Crops Ranking Sixth in Area of Cultivation in 1948

C - Corn
B - Beans
P - Peanuts
Bn- Bananas

SP- Sweet Potatoes
A/B-Two crops with same area
x - No crop of this rank with over 1 o/o of cropland

MAP 70

241 311 In many *municípios* on the north, west, and southwest of the Recôncavo, where corn and beans were the first and second crops, manioc and tobacco were third and fourth or vice versa. On the other hand, sugar cane was rarely a significant crop in any *município* where either corn, beans, tobacco, or manioc occupied a leading position.

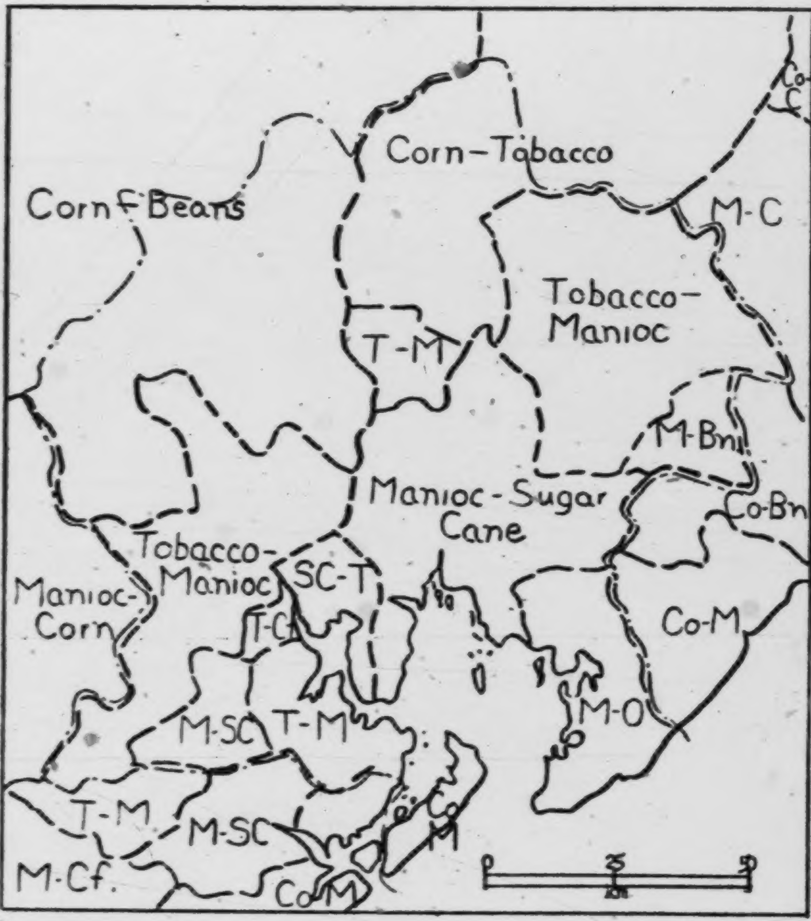
128 241 311 *Crop Combinations and Monocultures.* The crop combinations shown on Map 71 and Map 72 exist on two levels, as statistical combinations of the crops of various *municípios* and as functional associations of crops grown in an interdependent system.

241 311 The statistical crop combinations of the Central Recôncavo do not correspond to functional systems of cultivation, for although sugar cane, manioc, and tobacco are produced within individual *municípios*, the cultivation of sugar cane is entirely separate. The manioc and sugar cane of São Filipe and the tobacco and coffee of São Félix are also cultivated separately. The statistical combinations, therefore, merely summarize the economic specialization and diversification of the *município* economies. The tobacco-manioc and the corn-bean combinations of most *municípios* of the perimeter of the Recôncavo, from Alagoinhas on the northeast to Conceição do Almeida on the southwest, signify functional as well as statistical relationships. On the other hand, monocultural systems dominate within the Central Recôncavo and in a few other places. The areas in which the individual functional combinations and monocultures predominate are delimited as nodal crop regions on Map 73. The arrows on the map (Map 73) indicate the intermeshing of crop regions in the transitional zones.

249 244 311 The most extensive of the crop regions belongs to tobacco and manioc. In this region, which extends from the Southwestern Recôncavo in a long arc to the Eastern Recôncavo, at least 70 per cent and usually

[TEXT CONTINUED ON PAGE 240]

*102
241
311


Co-C
Corn-Tobacco
Corn & Beans
M-C
Tobacco-Manioc
T-M
M-Bn
Manioc-Sugar Cane
Co-Bn
Tobacco-Manioc
SC-T
Manioc-Corn
T-C
Co-M
M-O
M-SC
T-M
T-M
M-SC
Co-M
M-Cf.
Co-M
0
25
50
Km

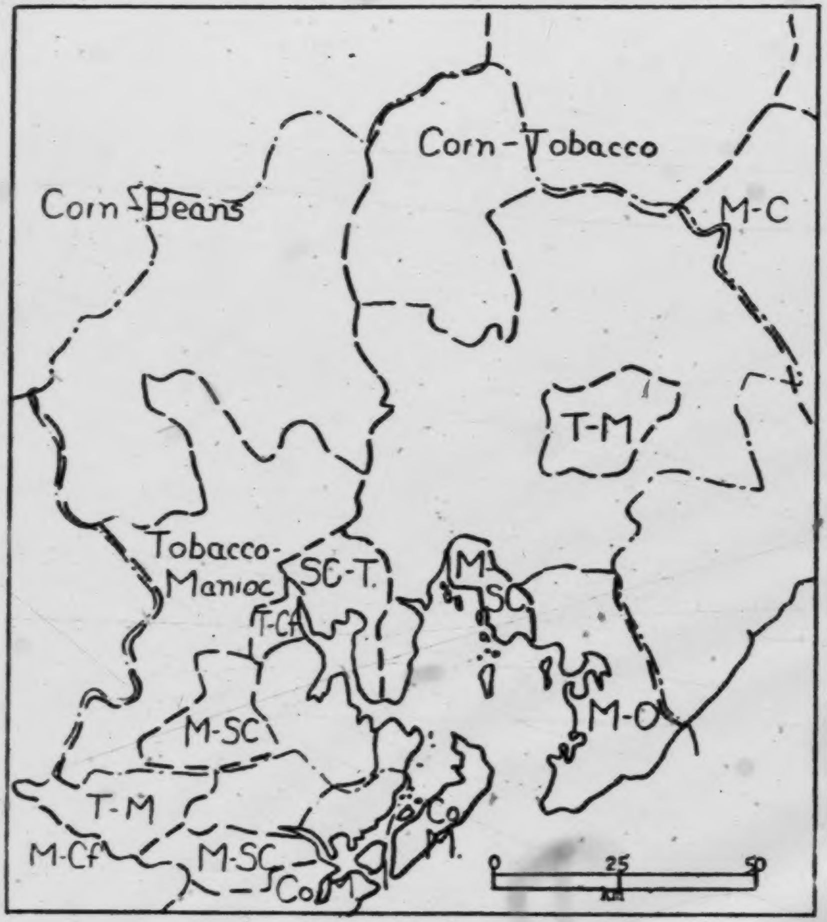
RECÔNCAVO OF BAHIA

Crops Ranking First and Second in Area of Cultivation in 1948

M - Manioc
T - Tobacco
Co- Coconuts
Cf- Coffee
O - Oranges
SC- Sugar Cane
C - Corn
P - Peanuts
Bn- Bananas

MAP 71

*102
241
• 311


Corn-Tobacco
Corn-Beans
M-C
T-M
Tobacco-Manioc
SC-T.
M-SC
T-Cf
M-SC
M-O
T-M
Co
M.
M-Cf
M-SC
Co M
0
25
50
Km

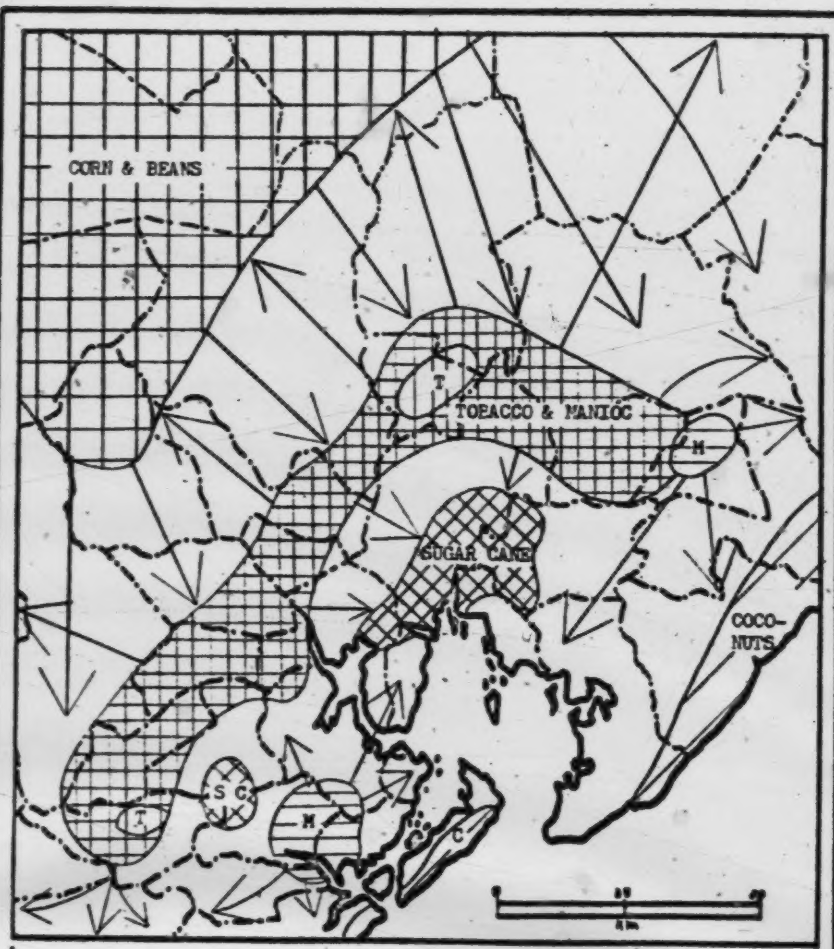
RECÔNCAVO OF BAHIA

Crops Ranking First and Second in Area of Cultivation in 1948 Where the Second Crop Occupied Over 20 per cent of the Total Cropland

M - Manioc
T - Tobacco
Cc- Coconuts
Cf- Coffee
SC- Sugar Cane
C - Corn
O - Oranges

MAP 72

*102
241
• 311


CORN & BEANS
T
TOBACCO & MANIOC
M
SUGAR CANE
COCO-
NUTS
S C
T
M
C
C
Km

RECÔNCAVO OF BAHIA

Crop Regions Based upon Area of Cultivation

T - Tobacco SC - Sugar Cane
M - Manioc C - Coconuts

MAP 73

249
244
311

80 per cent of the total cropland was in these two crops in 1948 (Map 74). A minimum of 20 per cent of the total cropland of all parts of the region was in tobacco, and except for a break in Coração de Maria and northern Santo Amaro, in manioc. Associated with this region were two small areas in which one of the components dominated the other--tobacco dominated in Santo Antônio and manioc in Pojuca.

The relationship of tobacco and manioc area varied widely within this region of their most intensive cultivation (Map 75). The mean for all the *municípios* of the region was 42 per cent of the total cropland in tobacco and 36 per cent in manioc. The theoretically ideal "duoculture" was approached in Cruz das Almas, with 54 per cent of the total cropland in tobacco and 42 per cent in manioc. The ratios of the area in the two crops in individual *municípios* is indicated in the list below. Only in Muritiba and Cruz das Almas did the areas of the two crops have a relative balance. In the southwestern part of the region, tobacco was ascendant in Santo Antonio and manioc in Conceição do Almeida.

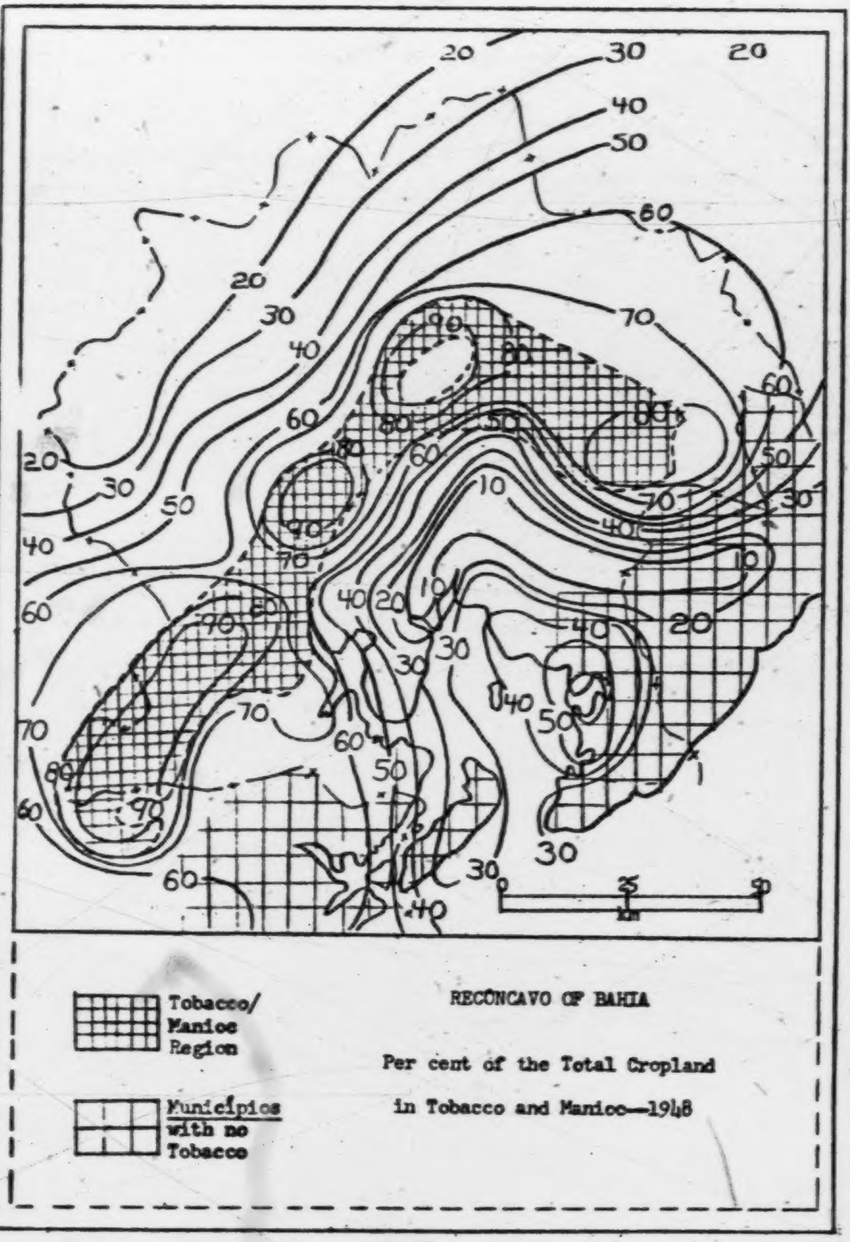
Ratio of Tobacco and Manioc Area

Santo Antônio	Tobacco	3.50 to 1
Conceição do Almeida	Manioc	2 to 1
Cruz das Almas	Tobacco	1.25 to 1
Muritiba	Manioc	1.50 to 1
Conceição da Feira	Manioc	2 to 1
São Gonçalo	Tobacco	3 to 1
Coração de Maria	Tobacco	4.50 to 1
Santo Amaro*	Manioc	2.50 to 1
Catu	Tobacco	3 to 1
Pojuca	Manioc	20 to 1

*These figures are for the whole of Santo Amaro. Probably the ratio in its tobacco-manioc zone would be about 3 to 1 in favor of tobacco.

North of the Rio Paraguaçu the position of tobacco *vis-à-vis* manioc became progressively stronger through Coração de Maria and continued strong into Catu, where cultivation of tobacco abruptly terminated. Pojuca had a manioc monoculture, with only 4 per cent of the cropland in tobacco and 81 per cent in manioc.

*102
249
244
• 311


0
25
50
Km
Tobacco/ Manioc Region
Municipios with no Tobacco

RECONCAVO OF BAHIA

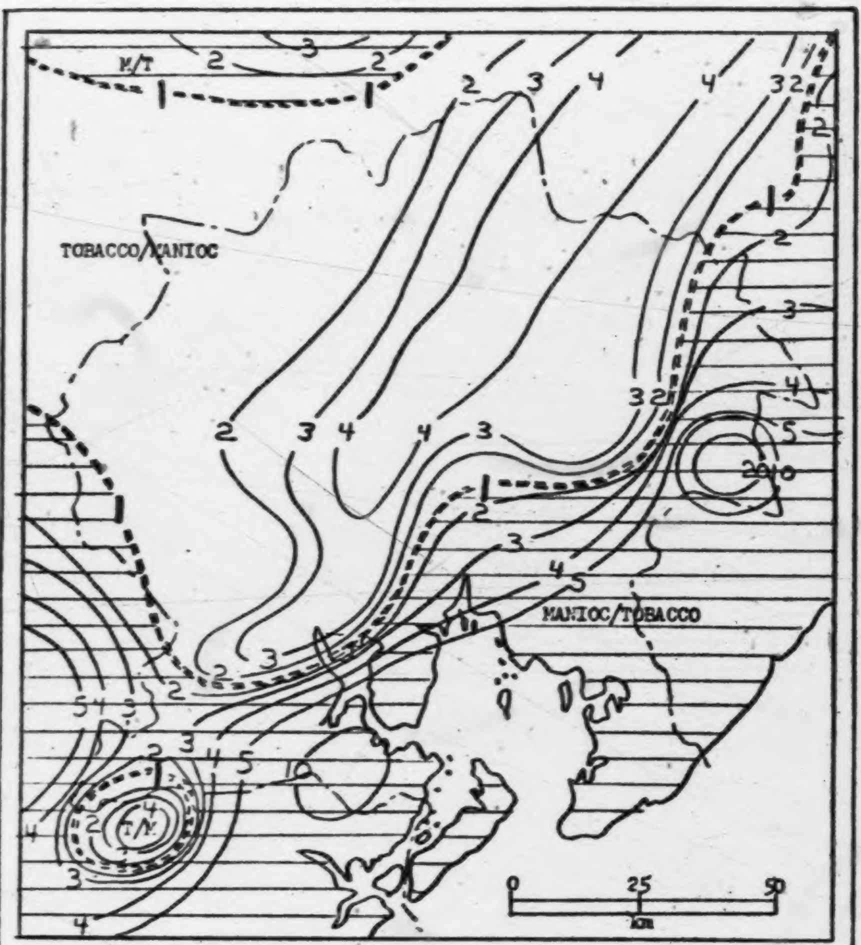
Per cent of the Total Cropland

in Tobacco and Manioc—1948

MAP 74

1:Haskins K-4,5 (1952-1954) 1956 SO11 Bahia Brazilians SO11

102
249
244
● 311


M/T
TOBACCO/MANIOC
MANIOC/TOBACCO
T/M
1
2
3
4
5
0
25
50
Km

RECÔNCAVO OF BAHIA

Relationship of the Cultivated Area in Tobacco and Manioc—1948

Tobacco/Manioc (T/M) - Area in tobacco exceeds area in manioc
Manioc/Tobacco (M/T) - Area in manioc exceeds area in tobacco

MAP 75

249 244 • 311 13 The physical setting of the tobacco and manioc region is distinctive in terms of the particular combination of topography, soils, climate, and vegetation which are joined along its crescent axis. The region lies along the semi-circular edge of the interior upland, overlooking the Bay and the Coastal Plain. In the south the fields of manioc and tobacco occupy the upper surfaces of the Crystalline Uplands and the adjacent Intermediate Hills. In the north, cultivation shifts to the summits and upper slopes of the Intermediate Hills, although there is some concentration on the extreme southern edge of the taboleiros. Thus the region occupies the deep flat-lying residual crystalline soils in the south but in the Tertiary soil zone to the north follows the slope lands where there is more rainfall and perhaps better local soils. The close correspondence of this region with the forest and scrub-forest transition has been repeatedly emphasized. A traverse across the tobacco-manioc region anywhere between Conceição do Almeida and Feira de Santana takes one from rough hills with at least scattered patches of broadleaf evergreen forest to flat uplands with cactus, thorny brush, and licurí palms.

249 244 433 161 361 A comparison of the map of population (Map 21) and of the relationship of tobacco and manioc cultivation (Map 75) points up the necessity for local sources of basic subsistence products. In the Southwest, where rural populations are relatively dense and where there are a number of large villages and towns, manioc tends to be cultivated over a greater area than does tobacco. In the tobacco-manioc region north of the Rio Paraguaçu, where tobacco is usually the leading crop, the density of rural population is lower, and there are no towns and only
[438] a few large villages. Thus there is close relationship between the relative intensity of manioc and the size of the local market.

175 249 244 The recent historical pattern of agriculture in the tobacco-manioc region can be reconstructed only on a general level. Cachoeira, which

Cachoeira, which
175 formerly included most of the western part of the region, was the center
178 of the production of tobacco for use in the slave trade. The growth of
249 [567] the trade in leaf tobacco in the nineteenth century brought great changes
[439] to the region, for it made tobacco a major commercial product in its own
right, no longer dependent upon the slave trade. Eventually this development gave the region of tobacco production a greater economic importance than the sugar cane region, although it remained subordinate in political and social influence. The development of the new tobacco economy also gave the region a greater superiority over the _sertão_, which could satisfactorily produce _fumo em corda_, but could grow only the poorest grades of _fumo em fôlha_.

174 Probably the tobacco-manioc region supplied manioc as the sub-
244 sistence food of the sugar economy, since it is the only nearby area
249 433 which was a center of manioc production. Perhaps manioc was produced
in the sugar cane zone, but in view of the intensity of sugar cane cultivation, this seems doubtful. In any case, the present relative level of manioc production in this crop region probably dates from the nineteenth century development of cigar tobacco production.

249 The second basic crop region of the Recôncavo is the sugar cane
311 monocultural area. It is sub-divided into a major zone, in Santo Amaro,
São Sebastião, and São Francisco; a minor zone in Cachoeira; and an outlier in São Filipe. It is estimated that in the first two zones 90 per cent of the cropland was in cane in 1948. In the São Filipe outlier of the sugar cane region the proportion seems to have been lower--perhaps 50 per cent of the cultivated area.

The physical association of the sugar cane region north of the
[13] Rio Paraguaçu and the Bay is relatively simple--a humid and formerly
forested undulating plain composed of mixed Cretaceous soils--_massapê_, _salão_, and _areia_. In São Filipe the land is rougher, but the sugar cane is grown upon heavy soils similar to the Cretaceous series.

249 161 361 The portion of the sugar cane region north of the Bay is an area of relatively dense rural population, with a large number of villages and plantation settlements and one city--Santo Amaro. The remaining areas of the sugar cane region have only moderately dense rural populations and no major urban centers, although the cidade of Nazaré is very close to the southern border of São Filipe.

[128] 249 178 The tremendous historical significance of the sugar cane region has been discussed at length in the section on the historical setting of the Recôncavo. As far as the sugar cane zone of Santo Amaro, São Francisco, and São Sebastião is concerned, the extent of the region does not appear to have changed very much since colonial times. Old engenhos are found throughout the zone, indicating past cultivation in all areas now in cane. The present usinas cultivate sugar cane intensively clear across the Cretaceous zone, so that it is not likely that the cane area has contracted. However, there are several abandoned engenhos and settlements on the north and east shores of the estuary of the Paraguaçu which seem to indicate that sugar cane cultivation was formerly more extensive around the Bacia do Iguape.

244 249 • 311 The two intensive crop regions of tobacco and manioc and sugar cane, as outlined above, can be viewed as nodal areas which are basic to the regional distinctiveness of the Recôncavo; they are for all practical purposes included totally within its limits; their crop patterns are not duplicated in any nearby area; and they include within their boundaries a very large part--and the most productive part--of its agricultural area.

241 311 In distinction to the above intra-Recôncavo regions there are at least three crops which overlap the borders of the Recôncavo, forming crop regions which have their most characteristic development in adjoining areas. The Atlantic coast of Salvador and Itaparica supports

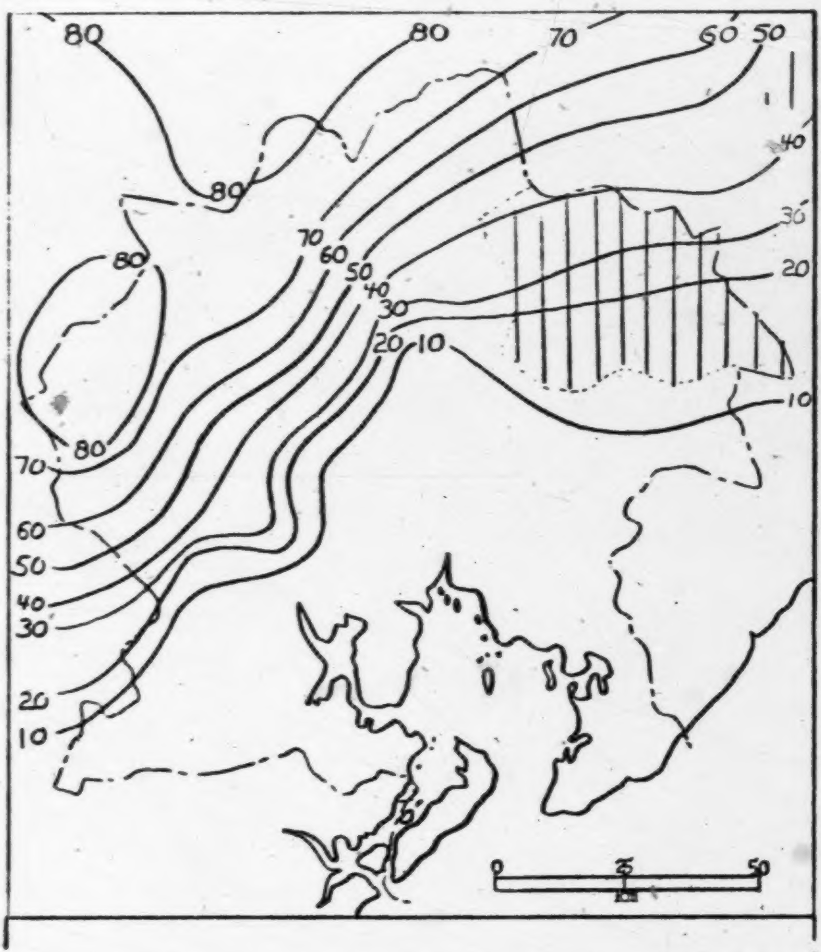
The Atlantic coast of Salvador and Itaparica supports
245 a coconut monoculture--a monoculture which is most strongly developed
311 north of the Recôncavo in Camassari and Mata de São João. The actual
area of the coconut monoculture within the Recôncavo is slight, and
beyond this monocultural zone, coconut cultivation is rarely significant within the region.

The coconut monoculture lies between the littoral forest and the
beach in Itaparica and between the *agreste* and the beach in Salvador
[161] and in the *municípios* farther north. Except in the *município* of
[162] Salvador, the rural population of the coconut area is not dense. The
[361] typical settlement of this zone is the fishing village, sprawled over
the beach near the mouth of a small stream. Inland the population is
scattered.

243 A much more important crop system intrudes upon the Northwestern
244 Recôncavo--the corn-bean system. The nuclear area for this system seems
311 to lie in northern Serrinha and in the *municípios* bordering upon the
state of Sergipe. The area in which over 80 per cent of the cropland
was in corn and beans in 1948 overlapped the borders of the Recôncavo
into western Feira de Santana and Santo Estêvão--a zone of low *serras*
(Map 76). In this zone the area in corn was from one to two times the
area in beans (Map 77).

Most of the soils of this region are either crystalline or
[134] Tertiary sands, but the pockets of soil which are actually cultivated
are almost invariably heavier and more water retentive than are the
sandy upland soils of the *taboleiros*. The corn-bean region generally
[162] has a small but nucleated rural population and a few medium-sized *cidades*,
which are the only towns of the very large *municípios* which are charac-
[361] teristic of the area. However, the part of the corn-bean region which
overlaps the Recôncavo has a number of villages and hamlets in the
valleys of the *serras*.

*102
243
244
• 311


80
80
70
60
50
40
30
20
10
0
25
50

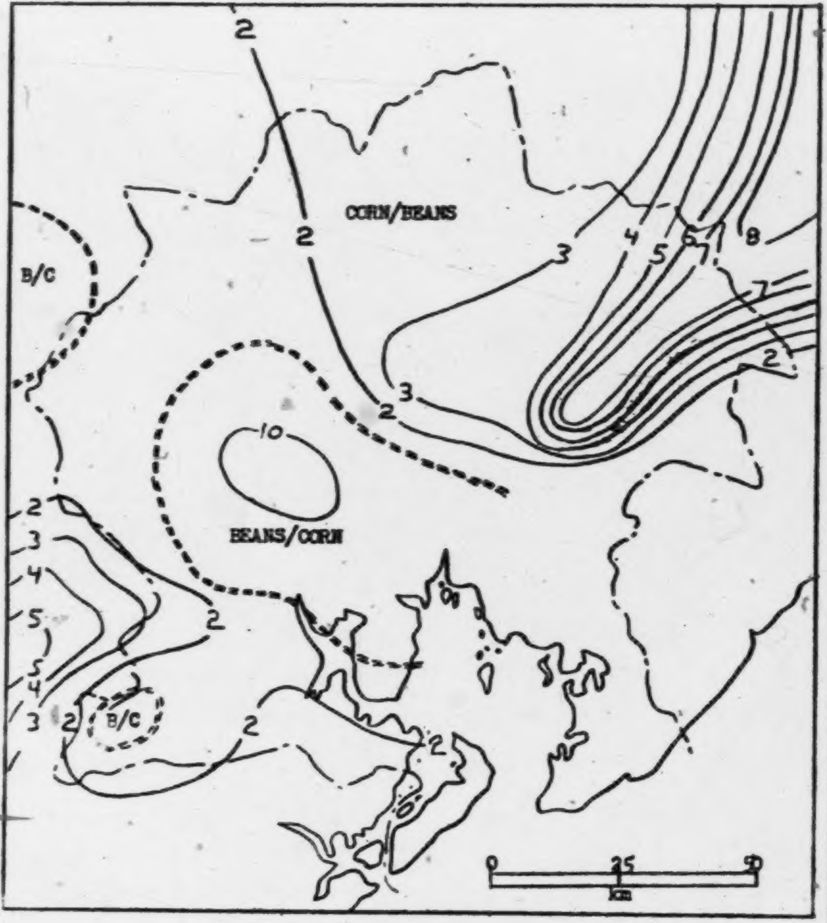
RECÔNCAVO OF BAHIA

Per cent of the Total Cropland in Corn and Beans--1948

Shaded area - Corn only

MAP 76

*702
243
244
• 311


2
CORN/BEANS
2
B/C
3
4
5
6
7
8
7
2
3
2
10
BEANS/CORN
2
3
4
5
2
5
4
3
2
B/C
2
2
0
25
50
km

RECÔNCAVO OF BAHIA

Relationship of the Cultivated Area in Corn and Beans—1948

Corn/Beans - Area in corn exceeds area in beans
Beans/Corn (B/C) - Area in beans exceeds area in corn

MAP 77

241
311

Between these principal crop regions in which the basic functional groupings or monocultures dominate the cropland, there are transitional zones in which the systems intermingle. Between the corn-bean region and the tobacco-manioc region there is a broad zone in which neither crop system dominates—a zone extending from south-central Castro Alves in a vast arc around the Recôncavo to Entre Rios. Within this zone the distribution of corn and beans and tobacco and manioc is general—there may be local specializations based upon such factors as soils and precipitation, transport and market facilities, availability of fertilizer, etc., but any area of *distrito* size is likely to cultivate all of the four crops. In the northeastern part of this transition zone, in Alagoinhas and Inhambupe, corn and tobacco dominate in their respective combinations. In northern Castro Alves manioc and corn are very strong.

The inner transition zone between the tobacco-manioc region and sugar cane region is narrower and much less a zone of mutual interpenetration. The edges of the cane areas are almost invariably abrupt—scattered, but only widely scattered, cultivation of manioc and tobacco exists in the zone between São Gonçalo-Conceição da Feira and the cane areas in Cachoeira and Santo Amaro.

In the transition zone east of the cane monoculture—in São Francisco and São Sebastião—the crop situation is more confused. Here the relative amount of cultivation in the *mata* and the *agreste* is low, and the fields are concealed in the wild vegetation. Moreover, as the capital is approached, a number of diverse crops for the urban market, especially oranges, become important. There is a good deal of subsistence manioc cultivation in the remote areas—small plots cultivated by charcoal burners, fishermen, and marginal people of the urban fringes.

241 Southwest of the estuary of the Rio Paraguaçu, in Maragogipe
311 and São Filipe, the crop pattern becomes very complex, as is shown by
the relative distribution of cropland in São Filipe:

Manioc	33 per cent
Sugar cane	28 " "
Coffee	25 " "
Tobacco	11 " "
Peanuts	1 " "
Corn	1 " "

Plus small areas of beans, oranges, bananas, sweet potatoes, and coconut.

174 It is very likely that there has been a historical connection between
245 the coffee culture of São Filipe and the main coffee zone far to the
249 southwest. Apparently the development of tobacco cultivation in Santo
311 Antônio has severed this connection.

Cultivation Systems—Tobacco and Manioc. The "ideal" system
249
244 of cultivation of tobacco and manioc[1] in the tobacco-manioc region has
221 the following general pattern:

(1) In mid-February a small tract, very commonly with an area of one tarefa[2] but sometimes larger, is cleared in the capoéira de caatinga (second-growth scrub-forest) or the capoéira de mata (second-growth
[412] littoral forest). Generally the capoéira is low brush, two to five
feet tall, which is easily cut with a facão—a long heavy knife which is a universal agricultural tool. Any heavy waste material that can be moved is dragged away from the plot; if there are tree stumps, they will not be grubbed out.[3] Sometimes the waste material on the surface of the field is burned, but this is by no means universal.

(2) A favored spot, either within the cleared field or in the adjoining capoéira, is prepared for a seed bed. Usually a site on the edge of a wood or near a steep slope is selected. Any available waste materials—corn stalks, old tobacco plants, weeds, brush, pieces of wood, and the like—are piled on the small plot, allowed to dry, and then burned.

241 311 North of the Paraguaçu, modification of the "ideal" system is more frequent, especially in municípios where the area in cultivation is relatively small. In Coração de Maria, for example, only 4 per cent of the area was cultivated in 1948. Here it is possible to open more "new" land upon which tall capoèira has developed. Since this município is remote--but more in terms of road transport than in actual distance--there is greater need to produce a high-value, low-bulk crop, such as tobacco, and less possibility for the commercial production of manioc. Many fields of tobacco are allowed to revert directly into capoèira. Since the land is more thoroughly fallowed and since there are fewer cattle and thus less manure, fertilization is generally less extensive in this area. A similarly modified pattern of cultivation is found in Catu and in the more remote parts of São Gonçalo.

In Santo Antônio, where the intensity of agriculture is increasing, but where the cultivated area is still relatively small, much "new" land can be used. In this município the area in tobacco is [249] large in relation to manioc, and thus some tobacco fields obviously revert directly to brush.

249 244 There seems to be no definite land rotation period in the tobacco-manioc region. Rather the period is controlled by the availability of land. In 1948, the município of Cruz das Almas, one of the most intensively cultivated areas of the tobacco-manioc region, had one half of its total surface in cultivation according to the official data. Approximately one-quarter of the total area was in each of the two crops. Under these circumstances, no more than two years of fallow can have intervened between the harvesting of manioc and the planting of tobacco. However, not all of the município can be cultivated, and certainly no more than three-fourths of the total area can be used for tobacco. It follows that in many cases no more than

243 either separately or in conjunction with tobacco and manioc. They are
244 [134] frequently grown on land thought to be not suitable for tobacco cultivation yet too good for manioc alone, such as the steeper slopes of the crystalline area where the heavier soils do not produce good quality tobacco.

Since the area in corn and beans is small and the amount of slope land large, the capoeira is extensive and frequently quite tall. After the slopes are cleared, the land is very often planted to mixed corn and beans, more rarely to one or the other. The crops are planted
[221] in March or April, perhaps in May, and even in June for beans alone. The planting season for these crops is extended both because they are tolerant of changes in season and because as crops secondary to tobacco they have a lesser priority. Some corn is usually planted early enough
[527] [862] so that it will ripen in time for São João (mid-summer day) festival for which fresh corn-on-the-cob is the traditional food. This festival is usually the beginning of the corn harvest, but the bean harvest
[251] begins a month later. Both crops are harvested by hand and, after drying, are shelled by hand, sacked, and either stored or sold. When the fertility of the soil is higher than normal or when there is labor to spare, the field may be planted to manioc after the corn and bean harvest.

243 As a result of the interpenetration of the corn-bean and the
244 249 tobacco-manioc systems, in many regions and on many individual proper-
311 ties the two co-exist. Usually the upland fields are in tobacco and manioc, with an occasional plot of corn and/or beans. Usually the slope-land plots are in corn or beans.

249 The Cultivation of Sugar Cane. In distinction to the crops discussed above, sugar cane is grown under a system of permanent

249 (4) The field is burned for the last time, and as new cane or grass appears, it is used as pasture.

(5) After one year of pasture, sometimes more, the field is replanted to cane.

[527] The length of the harvest varies. It begins with a festa (festival) in the first week of September and continues as long as there is cane and as long as the heavy rains hold off--usually about six months.

249 311 Within the sugar cane area most of the land is in cane or in temporary fallow pasture except: (1) very wet bottom lands; (2) steep slopes; (3) villages; and (4) the lands and yards occupied by the mills. The general aspect of this area is that of an unbroken sea of cane. Single fields are often large--a square kilometer is not uncommon--but they are divided into separate plots. The cultivation of other crops within the sugar cane area is very limited. Small house gardens for the laborers are common, but other commercial agricultural forms of land use are rare.

249 423 257 184 Land holdings, as will be seen, generally are large under this system. The orientation of the sugar industry in São Filipe is somewhat different than in the zone discussed above. Properties are smaller, the monocultural aspect less dominant, and the whole sugar economy more primitive. There were eighty-two small sugar mills in this area in 1940, compared to the eight large usinas of Santo Amaro. [273] Many of these produced crude sugar (rapadura) rather than the refined sugar or cane brandy (cachaça) which are the main products of the zone north of the Bay.

245 The Cultivation of Coconuts. The final important agricultural system of the Recôncavo is the coconut monoculture, a less highly organized permanent culture than the sugar cane system.

245 [311] Most coconuts are grown on moderate-sized plantations along the beaches, in sands, or occasionally in sandy loams. North of Salvador they are grown on dunes and beaches and, back from the sea, in sandy stream valleys where the supply of ground water is generous. There seems to be little selection in choosing coconuts for reproduction. Usually the nuts are planted eight meters or so apart, with a pile of organic trash over and around the nut to provide some additional fertility and to hold the moisture necessary for germination. The sprout must be protected from foraging animals, but once growth is well started, the tree receives little attention and no fertilization.

[433] Yields are moderate to low, from 15 to 40 per tree. Apparently the yields per tree are substantially higher (double) in the Bay area--Itaparica and Camassari--than in the area farther north--Mata de São João and Esplanada. [443] In the Bay area the nuts are usually sold in the markets of Salvador without processing.

241 178 Conclusion. The basic determinant of cultivation practices in the Recôncavo is custom. This is probably less true of the cultivation of sugar than of other crops, but the weight of tradition is heavy upon all agricultural enterprises. [454] It may be said that many relatively primitive agricultural practices survive because of ignorance of newer techniques and because of a lack of capital for investment in new tools, in machinery, in better seed, and in permanent land improvement. The importance of these factors in limiting change in Recôncavo agriculture, particularly as general factors operating indirectly upon individual cultivators and individual farms is not to be denied.

However, when the individual cultivator--sugar planter or tobacco share-cropper--is given an opportunity, in the form of new techniques and the necessary capital, to change and improve his operations and

231 Where there are large numbers of work animals the conditioning and maintenance of oxen and other beasts of burden are important agricultural activities. In all areas of the Recôncavo the livestock forage on grazing land rather than cultivated pasture, and there is no livestock feeding. Thus, animal husbandry in the Recôncavo is not part of a system in which crops are raised or pasture is planted to support or fatten livestock, as is the case in mixed farming areas.

311
233 Pastured Land. According to the agricultural census, the total area used as pasture in the Recôncavo in 1940 was about 280,000 hectares--only two times the total cultivated area.[3] The total area of pastured land in 1948 must have been much greater, perhaps 400,000 hectares, for there was a strong increase in the number of animals, and it seems unlikely that there was much increase in the carrying capacity of the wild vegetation.

As was suggested in the physical setting discussion, the basic grazing resources of the Recôncavo are the caatinga and agreste. These vegetation formations, modified by cultivation, fire, and grazing into capoeira--second growth--are used extensively for livestock along the perimeter of the Recôncavo, where cultivation is scattered, but also in such intensively cultivated areas as the Southwestern Recôncavo. In essence, all the uncultivated rural land of the zone of the caatinga and the agreste is grazing land, since there are few fences to restrain the large numbers of livestock.

There are scattered areas of grassland in the caatinga, the agreste, and the mata zones of the Recôncavo. Very often the caatinga of the uplands of the crystalline zone is replaced by grasses along the poorly-drained valley floors. These grassy valleys are scattered throughout the western half of the Recôncavo and are used as pasture

311
233
for small herds of dairy cattle and for the maintenance of a relatively small number of higher grade beef cattle and horses. Around Feira de Santana, however, there is a prominent concentration of grassland, and it is here that the cattle from the *sertão* are fattened before they are dispersed over the Recôncavo.

In the sugar cane zone coarse, rank grasses cover the lowest valley bottoms, which are frequently too wet and muddy to permit the transport of harvested cane. These grasslands are the pastures on which are grazed the work oxen and incidental animals used in sugar production. The limited areas of permanent pasture are supplemented by the fallow fields and by leaves from the harvested cane. Scattered patches of grass are found elsewhere in the humid lowland. Along the eastern side of the sugar cane zone there are grassy openings in the forest. In this area there are several cattle ranches on which the weak or sick animals of the large sugar *usinas* are rested and the reserves of oxen maintained. The forest, which is developed on mixed, sandy soils and is more like *agreste* than true littoral forest, apparently is held back by heavy grazing and by burning, so that the grassy openings are preserved.

In effect all the littoral forest is used for grazing to some extent. Even in very remote areas donkeys and pigs are to be found foraging on the scanty grasses and herbaceous vegetation of the forest floor.

In addition to the quality of the wild vegetation, two contradictory economic and social forces are important in determining the location and extent of grazing land within some local areas. In the Recôncavo, crop cultivation is generally more profitable than livestock industry. Where economic forces operate freely, grazing is likely to be relegated to the less desirable areas—infertile soils, poorly drained valleys, or zones remote from the local market. On the other

233 556 311 On the other hand, ranching is a prestige activity; the rancher almost invariably is an influential and relatively wealthy member of the local community. As such, he may command for grazing purposes land which would be more profitable to the owner and to the whole economy if it were under cultivation.

231 Livestock Production. The large livestock animals which are important to the Recôncavo—cattle, asses, mules, horses, sheep, and goats--are primarily the products of ranching enterprises, i.e., livestock *fazendas*. Many of these animals are bred in the *Sertão* west and northwest of the Recôncavo and brought into the region as young stock ready for use as labor animals, as milk producers, or as mature animals ready for fattening and slaughter. However, there is some basic livestock production within the Recôncavo, especially in the outer ring of *municípios*. Here livestock are raised under conditions basically similar to those of the *Sertão*.

233 The cattle *fazenda* is a grazing enterprise in which the reproduction of the herd is uncontrolled; there is no selective breeding. *Vaqueiros* (cowboys) are employed to hold and to move the herds over vast distances. [232] From time to time the young bulls are emasculated, and as they approach maturity, these oxen are usually driven to the Recôncavo. The remaining cattle are held until maturity and then driven across the *Sertão* to Feira de Santana. The characteristic cattle *fazenda* exists in a modified form in the Recôncavo. Since the land for grazing is more restricted, the herds are smaller, and sometimes the grazing area is fenced. Second growth is the basic forage, though, as has been seen, grass here plays a relatively more important role than in the *Sertão*. [232] There have been a few attempts to breed selectively in the Recôncavo.

CHAPTER VIII

AGRICULTURAL PROPERTIES

241
231
423
● 311

The agricultural properties of the Recôncavo are diverse in functional type, tenure, and size. In most municípios there are to be found three basic production types: crop cultivation units, mixed crop cultivation and livestock producing units, and ranches. The properties of any local area may be owner or administrator operated, rented, or, in some areas, occupied informally by "squatters." In distinction to most agricultural areas of the United States, the Recôncavo has a very large number of extremely small agricultural properties, frequently with less than 2 hectares. There are also a number of large properties with more than 10,000 hectares, and in many areas large and small properties are closely intermixed.

241
423
184

Despite the widespread diversity of agricultural properties, there are distinct regional patterns which are based upon the predominance of certain types and sizes of properties and upon characteristic modes of possession. The regional patterns of agricultural properties correspond in a general manner to the crop regions delineated in the previous discussion.

241
423
[127]

The basic source of information about the agricultural properties of the Recôncavo is the 1940 economic census.[1] No more recent source is as yet available to replace or to verify or correct these fifteen year old data. However, generalizations based upon these data were substantiated in most cases by the field investigations undertaken for the present study.

[178]

It is apparent that in so traditional a region as the Recôncavo, the institutional characteristics of agriculture, property types included, change very slowly.

241 423 127 311 Of the 12,500 square kilometers of the Recôncavo, only about 800,000 hectares were enumerated in the agricultural section of the 1940 economic census--71 per cent of the total land area. In the various *municípios* of the region, the enumerated area varied from 39 per cent of the land surface in Alagoinhas to 110 per cent in Itaparica (Map 87). In a few cases, such as Itaparica, the area given in the agricultural section of the census exceeded the official total area of the *município*.[2] Where the political boundaries were not delimited precisely, properties may have been credited to the wrong *município*. More probably, however, these situations result from the over-estimation of the areas of individual properties--precise surveys of agricultural properties are virtually unknown.

There was a general correspondence between the intensity of land use (Map 2) and the relative area included in the 1940 agricultural census. This latter area will be referred to as "enumerated area" in the following discussion. Those lands not included in the agricultural census were urban areas, public domain, or in a few cases, private land held for speculation. However, not all of the unenumerated land was unused from the agricultural point of view, for in some of the less densely settled areas "squatters" are quite common.

241 231 423 311 Production Types of Agricultural Enterprises. In the 1940 census the agricultural properties of Brazil were divided into six classes, based in part upon the type of production and in part upon the scale of operation. The three main functional types were *agricultura* (crop cultivation), *agro-pecuária* (crop cultivation with livestock production), and *pecuária* (livestock production). In this context it is important to note that while *agro-pecuária* may include mixed agriculture--in the sense of functionally interdependent crop and livestock production

[TEXT CONTINUED ON PAGE 292]

241 231 423 311 within the individual agricultural unit--properties classifed within the group may have merely co-existing crop and animal production. In the Recôncavo, cultivation and animal husbandry are carried on separately within the individual properties, except (1) where labor animals are involved, or (2) where manure for tobacco cultivation is produced on a tobacco-growing farm. Each of the three main production types was classified as either a large-scale or a small-scale unit, on the basis of the amount of cropland, the number of animals, or both.[3] The distribution of the 27,513 agricultural properties and the 837,699 hectares of enumerated land of the Recôncavo among the various production and scale-of-operation classes is shown on the accompanying table (Table XIV).

Most of the agricultural properties of the Recôncavo were small-scale units which were engaged solely in crop cultivation or which produced both crops and livestock. Ninety-nine per cent of all properties, encompassing 58 per cent of the farmland, were small-scale units. The number of cultivation and of mixed cultivation-livestock units was approximately the same; the mixed units were, on the average, more than twice as large as the exclusively crop producing units. Although the number of purely livestock producing units--ranches--was small, the total area which they encompassed was relatively large, and the mean size of individual units was over 450 hectares. Even more notable is the fact that less than 250 large-scale livestock units, about 1 per cent of the total number of units, held 13 per cent of the land in agricultural properties.

231 233 Livestock Units. Agricultural enterprises whose activities were confined exclusively to livestock production were found in every município of the Recôncavo and in every adjoining município in 1940. In most areas, however, the number of such livestock units was very

[TEXT CONTINUED ON PAGE 294]

TABLE XIV

AGRICULTURAL PROPERTIES OF THE RECÔNCAVO—CLASSIFIED BY TYPE AND SCALE OF OPERATION—1940

	Crop Cultivation Only	Crop Cultivation and Livestock Production	Livestock Production Only	All Types
		Number and Area of Properties		
All Properties:				
Number	13,221	13,587	705	27,513
Area*	212,545 ha.	493,210 ha.	131,944 ha.	837,699 ha.
Mean Size	16 ha.	36 ha.	187 ha.	30 ha.
Small-Scale Properties:				
Number	13,144	13,558	458	27,160
Area	167,406 ha.	298,408 ha.	26,932 ha.	483,746 ha.
Mean Size	13 ha.	21 ha.	59 ha.	18 ha.
Large-Scale Properties:				
Number	77 ha.	29 ha.	247 ha.	353 ha.
Area	28,703 ha.	12,649 ha.	107,199 ha.	148,551 ha.
Mean Size	373 ha.	436 ha.	434 ha.	421 ha.
		As Per cent of the Number and Area of all Properties		
All Properties:				
Number	48	49	3	100
Area	25	59	16	100
Small-Scale Properties:				
Number	48	49	2	99
Area	20	35	3	58
Large-Scale Properties:				
Number	-	-	1	1
Area	3	1	13	18

*Because the census does not give data on the size of some units in order to preserve the anonymity of the information, the totals do not precisely equal the sums of the various components.

Source: Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia, Vol. II.

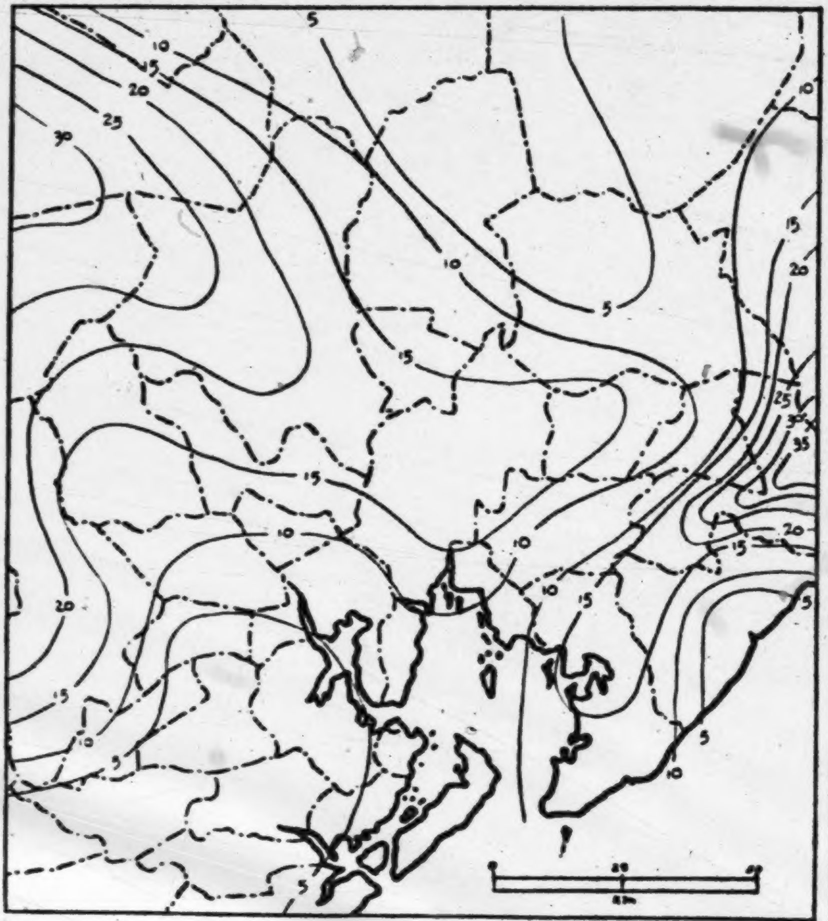
241
231
423
311

231 small (Map 88). Within the Recôncavo, only the eastern part of the
233 Central Recôncavo and the environs of Feira de Santana had even a
moderate number of ranches. Livestock enterprises generally occupied
less than one-fifth of the enumerated area (Map 89). These properties
were relatively important in the Northwestern and Central Recôncavo,
a reflection of the importance of ranching and cattle fattening in the
northwest and of the need for work animals in the sugar cane region. In
the Southwestern Recôncavo crop cultivation is too intensive and wide-spread
to share the land with many ranches. Except in the southwest,
20 per cent of the total enumerated area was in livestock units, along
the limits of the Recôncavo. In relation to the total area, the extent
[311] of livestock properties varied from place to place along the border
zone (Map 90). Beyond the Recôncavo, ranching is more important in
the crystalline areas, whether *caatinga* or *agreste*, than in the Tertiary
taboleiros.

231 As has been pointed out, large-scale properties are especially
233 important among the livestock production units. In most parts of the
433 Recôncavo the ratio of the area in large-scale and in small-scale live-stock
units was about three to one. The analysis of the mean size of
large-scale livestock units, plotted on Map 91, emphasizes the diversity
within the region and discloses the tremendous size of the ranches in
the coastal *agreste* northeast of the Recôncavo. Since the number of
large-scale livestock units was small and the size of the units highly
variable, the mean values for the areas of these properties may be
deceiving. Nevertheless, it is significant that the mean size of live-stock
unit was large in the Central Recôncavo, where there are a number
[313] of *fazendas* in the forested hills around the sugar cane region. These
[249] properties are used primarily as sources of firewood for the *usinas*

[TEXT CONTINUED ON PAGE 301]

*102
231
233
● 311


5
10
15
20
25
30
35
20
15
10
5
0
20
40
Km

RECÔNCAVO OF BAHIA

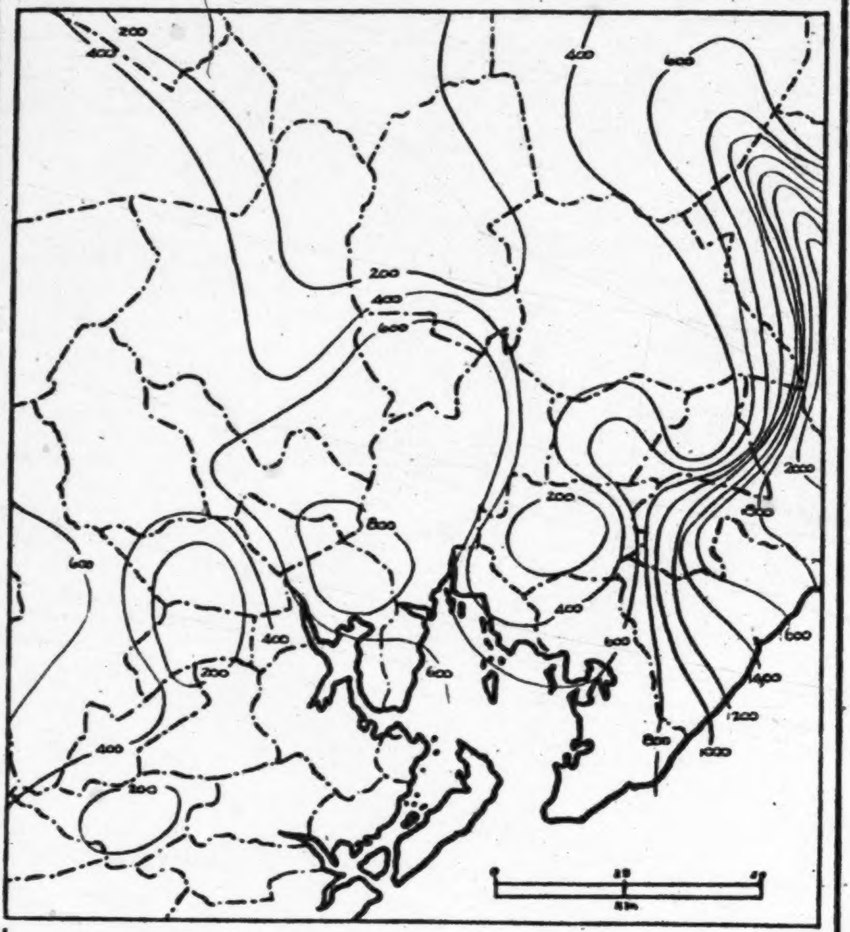
Per cent of the Total Land Area in

Livestock Enterprises--1940

Source of data: Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia, Vol. II.

MAP 90

*102
231
233
• 311
433


200
400
600
400
600
200
400
600
800
600
200
400
600
400
200
600
400
600
2000
1800
1600
1400
1200
1000
800
400
200
0
20
40
Km

RECÔNCAVO OF BAHIA

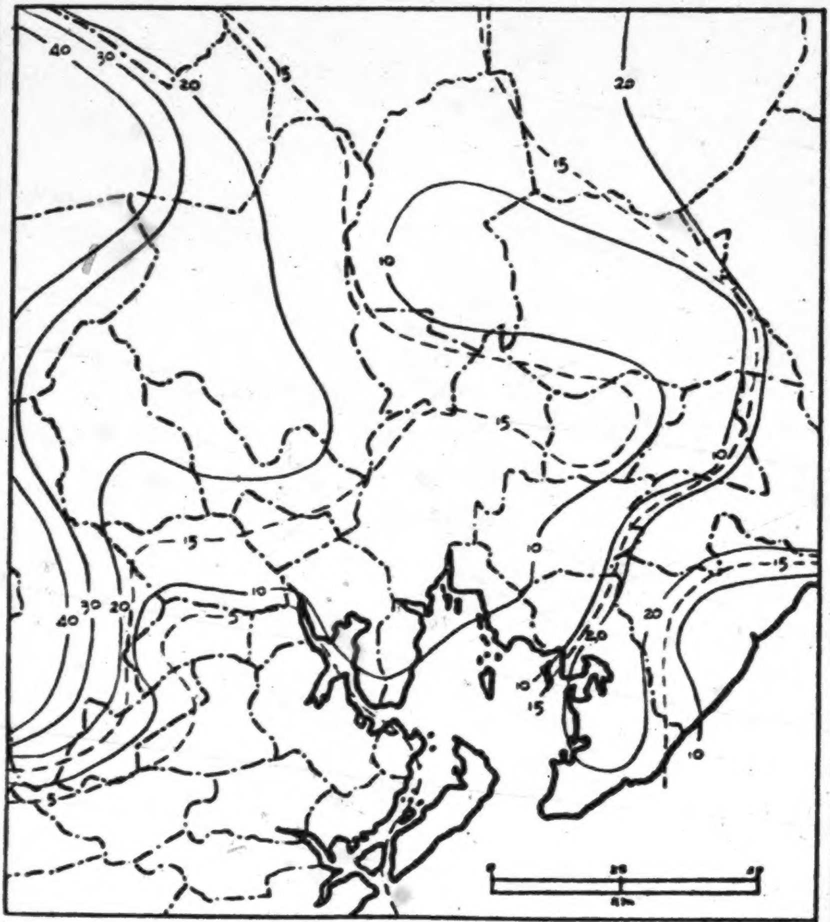
Mean Size of Large-Scale Livestock Enterprises—1940

In Hectares

Source of data: Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia, Vol. II.

MAP 91

*102
231
233
● 311
433



RECÔNCAVO OF BAHIA

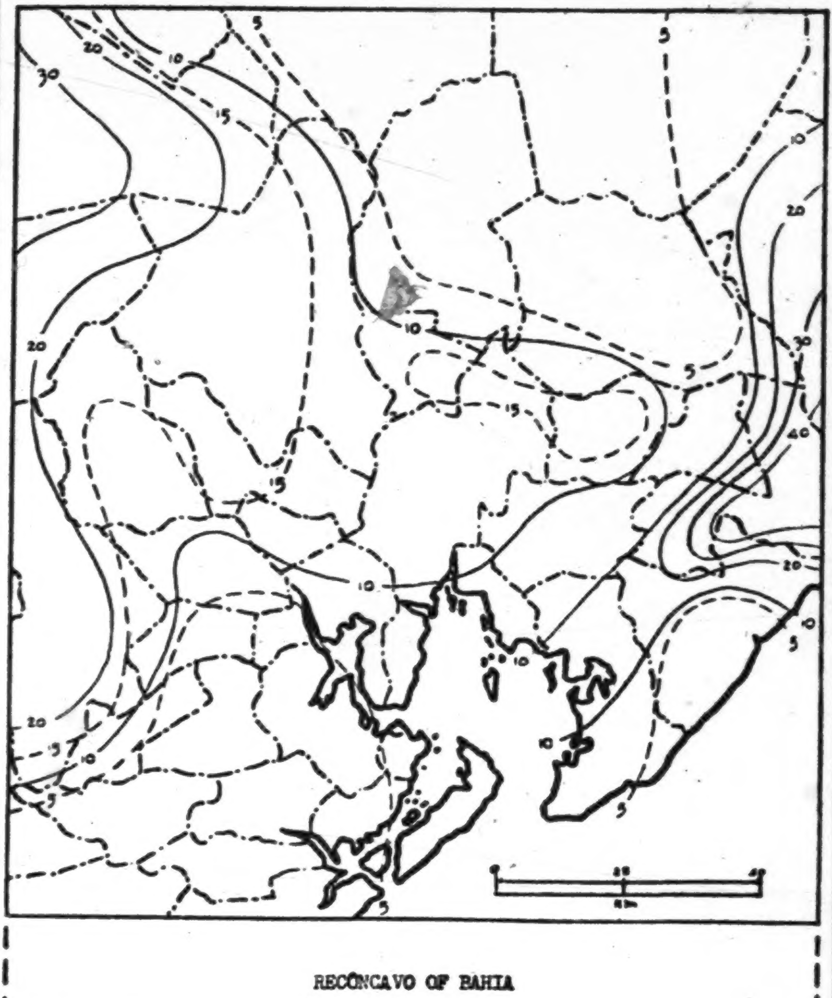
Per cent of the Enumerated Area in

Large-Scale Livestock Enterprises—1940

Source of data: Recerseamento Geral do Brasil: 1940. Censos Econômicos, Bahia, Vol. II.

MAP 92

*102
231
233
433
311


30
20
10
5
15
20
10
15
15
10
20
30
40
20
10
5
10
10
5
20
5
10
5
5
0
20
40
Km

RECÔNCAVO OF BAHIA

Per cent of the Total Land Area in

Large-Scale Livestock Enterprises--1940

Source of data: Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia, Vol. II.

MAP 93

231
233 and locomotives of the cane area, but, as has been pointed out previously,
433
[313] they have supplementary livestock production.[4]

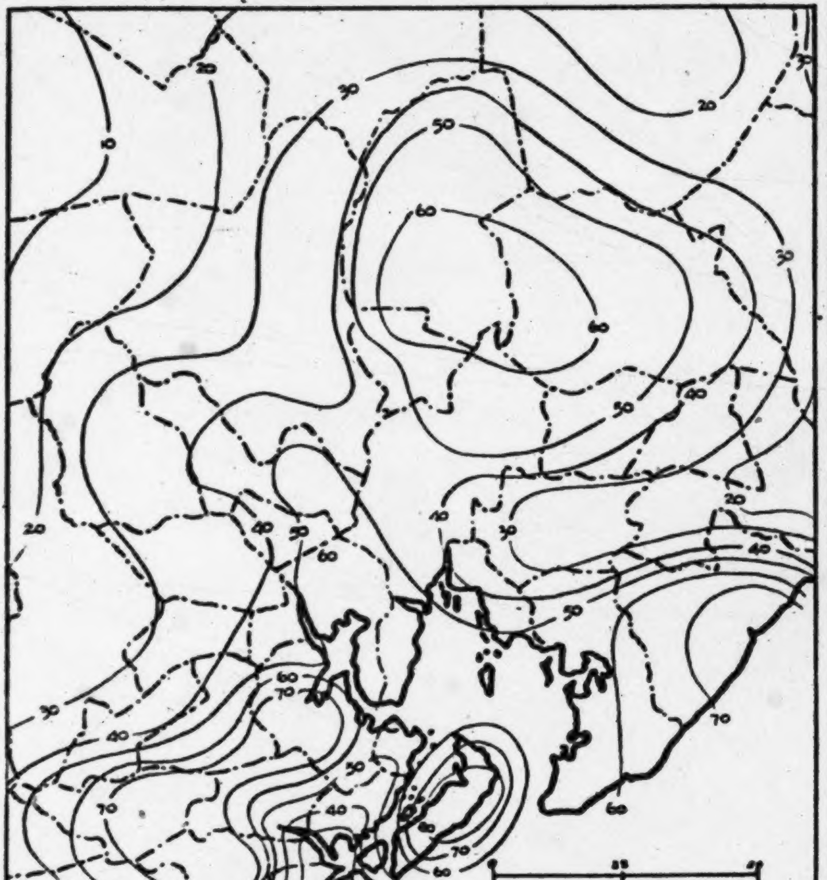
[249] Of the 247 large-scale livestock units in the Reconcavo, 65, with
231 a total area of almost 30,000 hectares, were in the *município* of Feira de
233
311 Santana (Maps 92 and 93). Another 39, with about 16,000 hectares of
433 land, were in the Central Recôncavo. Each of these two areas has a distinctive character: the Central Recôncavo *fazendas de gado*--cattle ranches--supply oxen and horses, asses, and mules to the sugar economy; the large *fazendas* of Feira de Santana, with extensive grassy pastures, serve the *campo de gado*--cattle market--of the *cidade* and thereby the whole economy of the Recôncavo.

231 Crop Cultivation Units. Almost one-half of all farms in the
241 Recôncavo produced no animals in 1940. In the marginal areas of the
311 region, excepting always the southwest, less than one-third of the farms
184 were pure crop cultivation units (Map 94). On the other hand, crop farms were particularly numerous on the southern littoral, where the forests are not salutary to livestock--except swine and fighting cocks. The Northern Recôncavo, where ranching is not an important activity, had a relatively large number of crop cultivation units, as had Salvador and the adjoining coastal *município*, Camassari.

241 Relative to both the enumerated and the total area, the purely
311 crop cultivation units were very important in Itaparica and Santo Amaro and unimportant around the border zone of the Recôncavo (Maps 95 and 96). On Itaparica and in the sugar cane region, crop cultivation units occupied over one-half the total land area--over 85 per cent on the island of Itaparica. The size of crop cultivation properties in the Recôncavo was generally small, but there were very great local differences
000 (Map 97). The tobacco-manioc region, especially in the Southwestern

[TEXT CONTINUED ON PAGE 306]

*102
241
• 311


20
10
30
50
60
20
30
60
50
40
20
40
50
60
40
30
20
40
50
30
60
70
40
70
50
40
80
70
60
30
50
60
30
70
60

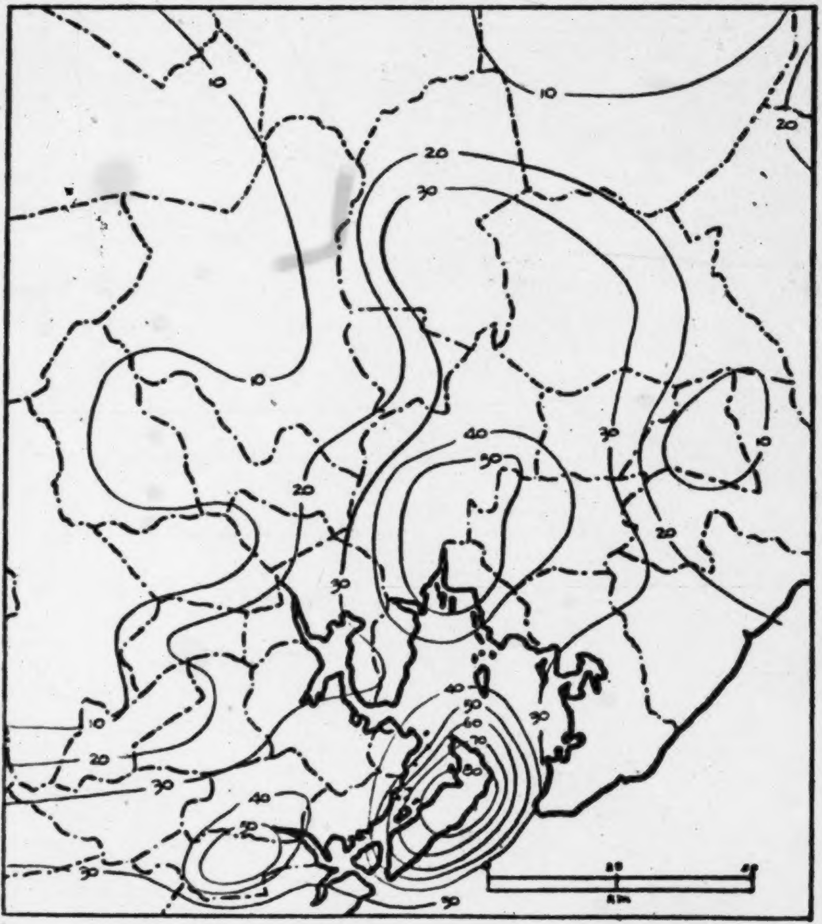
RECÔNCAVO OF BAHIA

Per cent of All Agricultural Enterprises Which Were Crop Cultivation Enterprises--1940

Source of data: Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia, Vol. II.

MAP 94

702
241
311


10
10
20
20
30
10
30
40
50
10
20
30
20
40
50
60
70
80
30
10
20
30
40
50
30
30
Km

RECÔNCAVO OF BAHIA

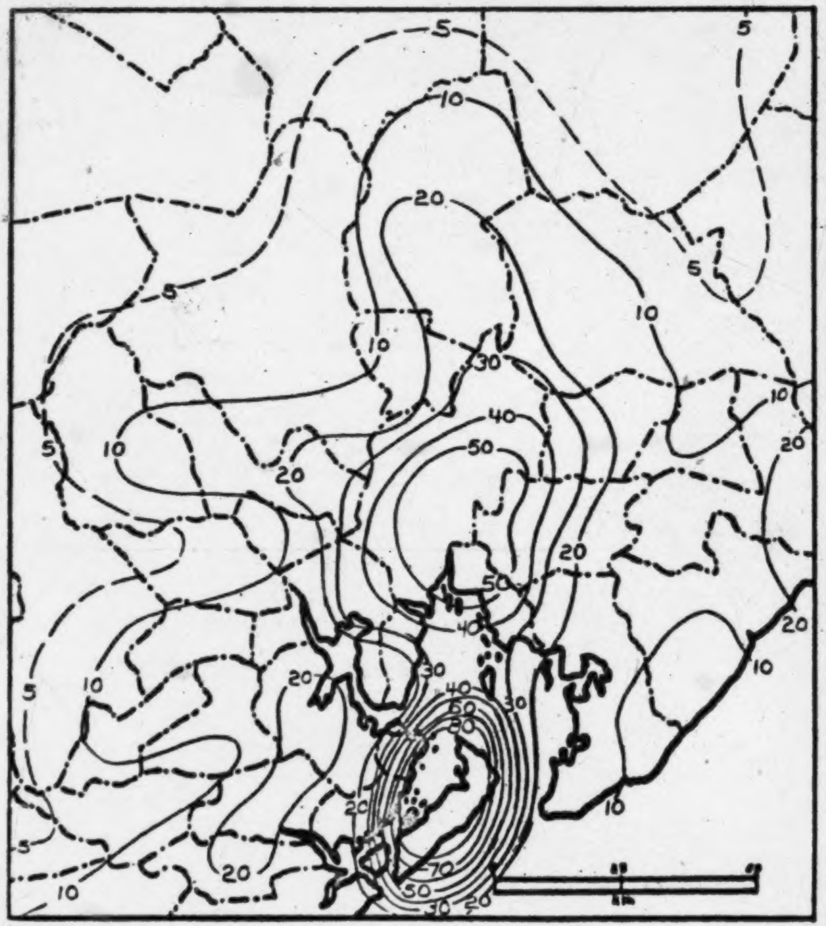
Per cent of the Enumerated Area in

Crop Cultivation Enterprises—1940

Source of data: Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia, Vol. II.

MAP 95

*102
241
• 311



RECÔNCAVO OF BAHIA

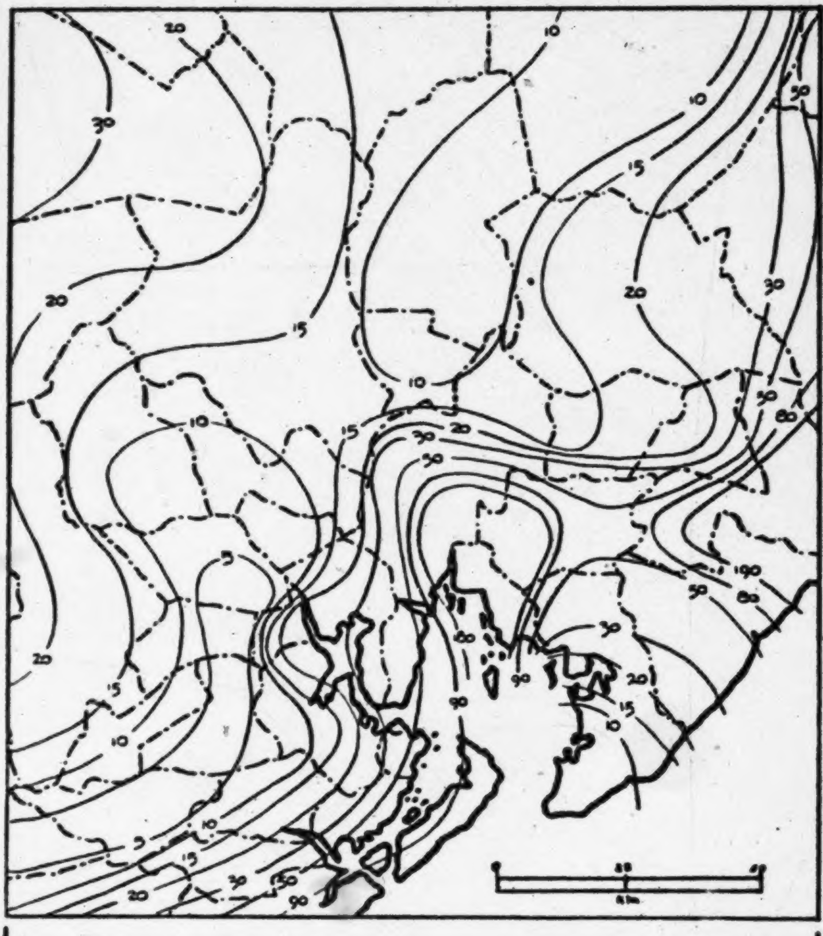
Per cent of the Total Land Area in

Crop Cultivation Enterprises—1940

Source of data: Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia, Vol. II.

MAP 96

*102
241
• 311


20
10
30
10
50
15
20
30
20
15
10
15
10
30
20
50
50
80
5
20
15
10
190
50
80
30
20
15
10
90
90
100
5
10
15
30
50
90
20
0
20
40
Km

RECÔNCAVO OF BAHIA

Mean Size of Crop Cultivation Enterprises—1940

In Hectares

Source of data: Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia, Vol. II.

MAP 97

The tobacco-manioc region, especially in
249 the Southwestern
244 Recôncavo, was a zone of very small properties--in Cruz das Almas and
311
423 Coração de Maria the mean size of crop cultivation units was 9 hectares, while in São Filipe it was only 5 hectares. This zone of small crop cultivation units is part of a belt, parallel to but well back from the coast, which originates in the _serras_ of the coffee zone, crosses the Recôncavo along the _caatinga-mata_ transition, and follows the _caatinga-agreste_ boundary northward along the eastern edge of the Tertiary _taboleiros_. The small-property belt thus lies between the littoral, with its large plantations of sugar cane and its ranches, and the dry _sertão_, with its extensive livestock economy.

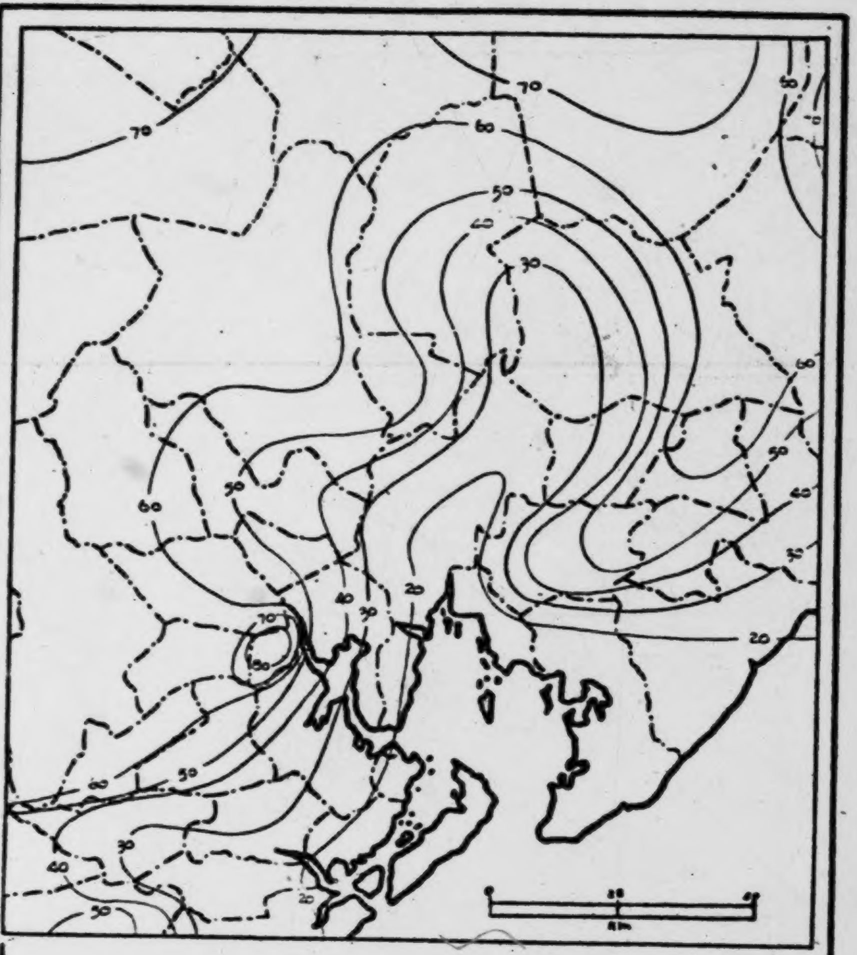
241 The Central Recôncavo was a zone of large crop cultivation proper-
249 ties, primarily sugar cane plantations. Although there are a large
311
423 number of livestock in the sugar cane region, the plantations use, rather than produce, animals and were thus classified as crop cultivation units. The plantations of the sugar cane area are very diverse as regards size, and many of the individual properties are now operated collectively by large _usinas_. Nevertheless, there are still a number of small properties, producing cane which is sold to the large mills.

241 _Mixed Crop Cultivation-Livestock Producing Units_. A little over
231
233 one-half of all the farms in the Recôncavo produced livestock as well
311 as crops. These units occupied almost 60 per cent of the total area of all properties. However, the area in which over half the properties were mixed units was limited to a broad perimeter zone which included all the outer _municípios_ of the Eastern, Northwestern, and Southwestern Recôncavo (Map 98). In Itaparica and Santo Amaro, where crop cultivation units were very important, there were relatively few mixed units.

244
249 The maps of the area in mixed units in relation to enumerated
231 area (Map 99) and total area (Map 100) confirm the observation that
233

[TEXT CONTINUED ON PAGE 311]

*402
241
231
233
• 311


70
70
50
60
50
40
30
60
60
50
50
40
30
20
60
50
70
80
40
30
20
20
60
50
30
40
20
50
0
Km

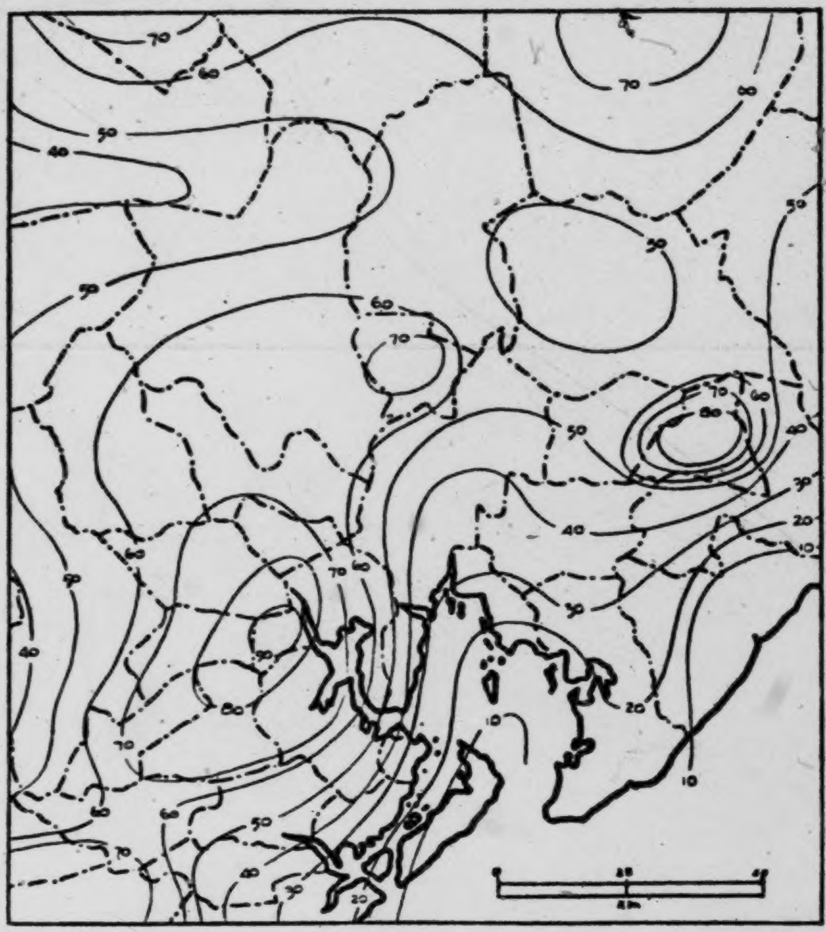
RECÔNCAVO OF BAHIA

Per cent of All Agricultural Enterprises Which Were Crop-Livestock Enterprises--1940

Source of data: Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia, Vol. II.

MAP 98

*402
241
231
233
• 311


70
60
50
40
50
60
70
70
80
50
70
60
80
60
40
50
30
20
40
10
50
60
70
60
50
40
90
80
70
60
70
60
50
40
30
20
10
20
10
0
20
40
Km

RECONCAVO OF BAHIA

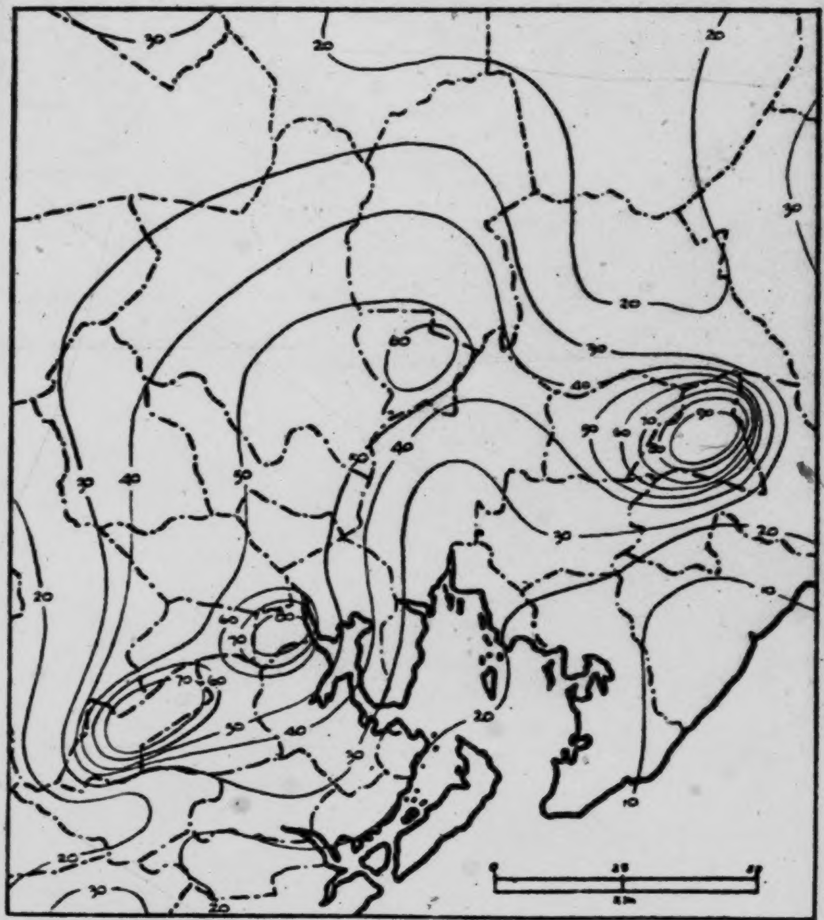
Per cent of the Enumerated Area in

Crop-Livestock Enterprises--1940

Source of data: Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia, Vol. II.

MAP 99

*702
241
231
233
• 311


30
20
20
30
20
30
60
40
90
70
80
60
50
40
40
30
50
30
20
20
10
60
80
70
70
60
30
40
30
20
20
10
30
20
0
25
50
Km

RECÔNCAVO OF BAHIA

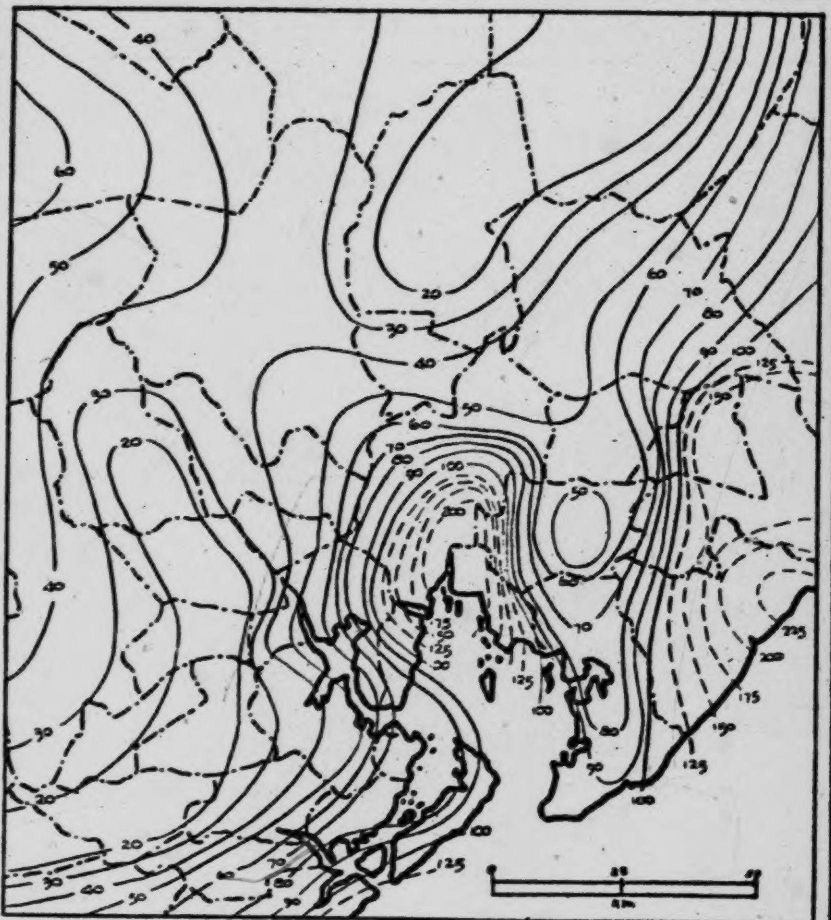
Per cent of the Total Land Area in

Crop-Livestock Enterprises--1940

Source of data: Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia, Vol. II.

MAP 100

*102
241
231
233
311


20
30
40
50
60
70
80
90
100
125
150
175
200
225
0
25
50
Km

RECÔNCAVO OF BAHIA

Mean Size of Crop-Livestock Enterprises—1940

In Hectares

Source of data: Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia, Vol. II.

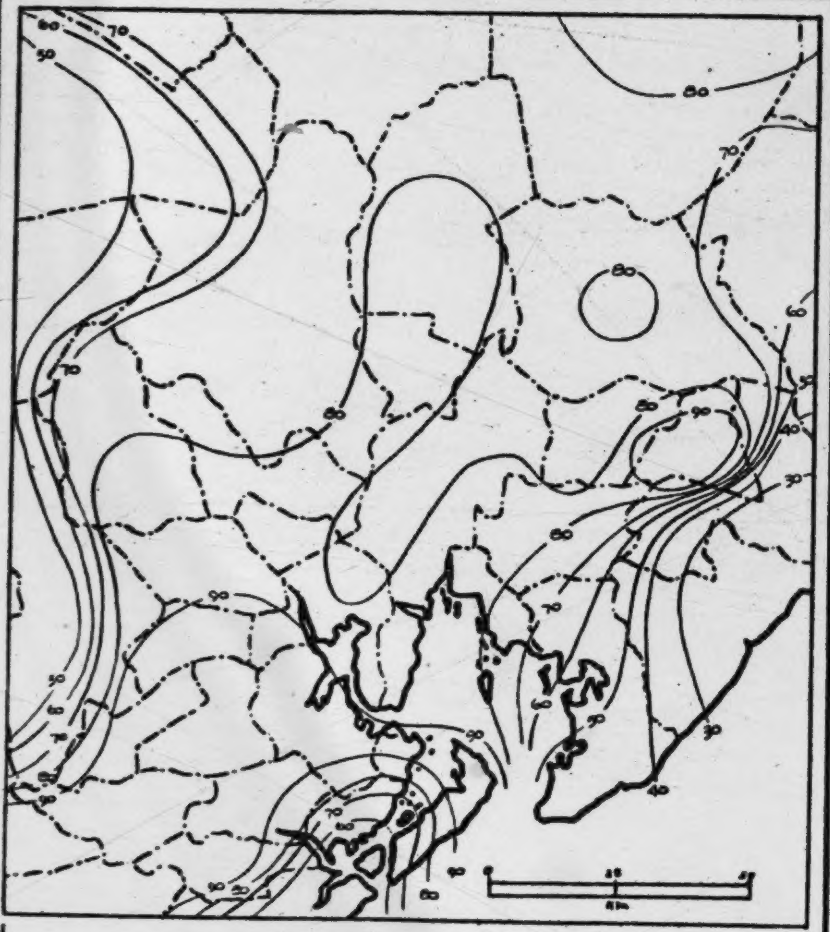
MAP 101

244 249 231 233 [423] [311] the tobacco-manioc region is an area of co-existing crop and livestock production. The mean size of mixed units of both the tobacco-manioc region and the western and northern perimeter of the Recôncavo was small—20 to 40 hectares—but was significantly larger than the mean size of crop farms in the same areas (Map 101). Like the purely cane-producing plantations, the mixed units of the Central Recôncavo were relatively large.

241 231 232 311 Crop Cultivation and Mixed Crop Cultivation and Livestock Producing Units Combined. The distribution of the area in crop and crop-livestock units combined, as shown on Maps 102 and 103, reaffirms the regional distinctiveness of the Recôncavo. In almost the entire region over one-half the total area was in these two types of crop-producing properties. None of the adjoining municípios had as much as 50 per cent of their total area in these two types of units, and in all but three, less than one-third the land was in crop or crop-livestock properties.

241 311 184 [231] [233] Regional Pattern of Agricultural Properties. The distribution of the three major production units is summarized on Map 104. In each of the two basic regions—crop and crop-livestock—one production type dominated, in number and in area, over the others. The Central Recôncavo with the island of Itaparica and, beyond the Recôncavo, the environs of Nazaré composed a region in which most of the agricultural land was in crop cultivation units. North of the Bay, most of these crop cultivation units were sugar cane plantations. On Itaparica there were several kinds of crop cultivation units—coconut plantations, diminutive manioc farms, and across from Salvador, small summer estates with a few cultivated fields. Around Nazaré most of the crop cultivation properties appeared to specialize in the production of manioc.

*102
241
231
233
• 311


80
70
50
80
70
80
60
80
90
50
40
30
70
60
50
90
30
40
90
70
80
90
80
0
20
40
Km

RECÔNCAVO OF BAHIA

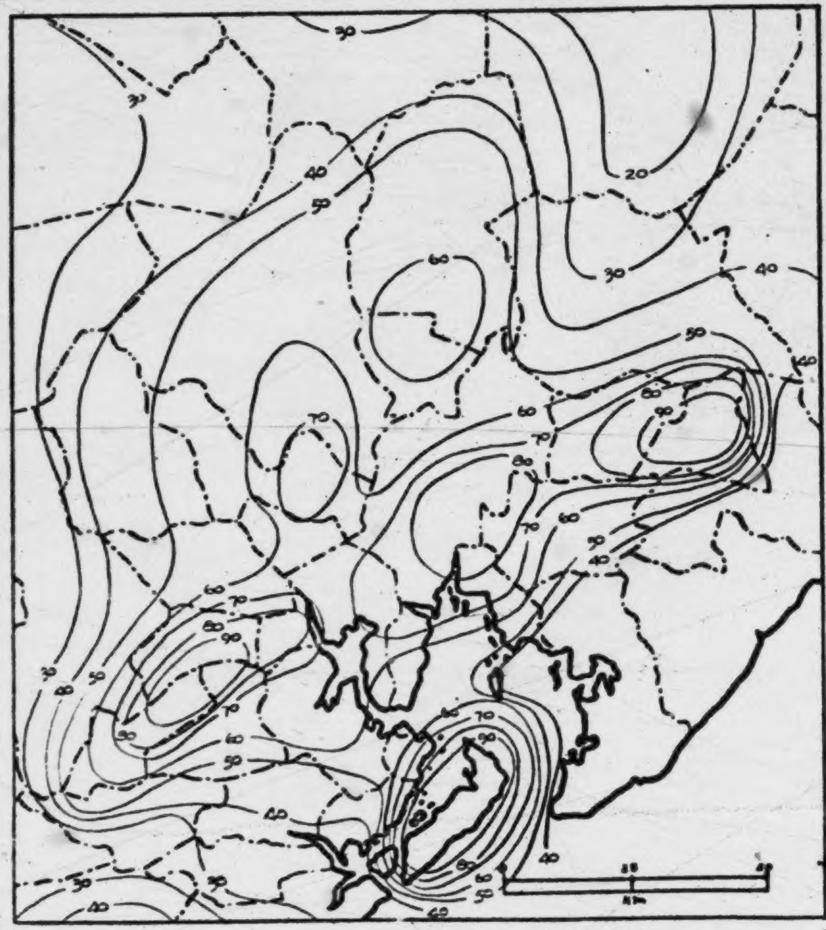
Per cent of the Enumerated Area in

Crop Cultivation and Crop-Livestock Enterprises--1940

Source of data: Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia, Vol. II.

MAP 102

*102
241
231
233
● 311



RECÔNCAVO OF BAHIA

Per cent of the Total Land Area in

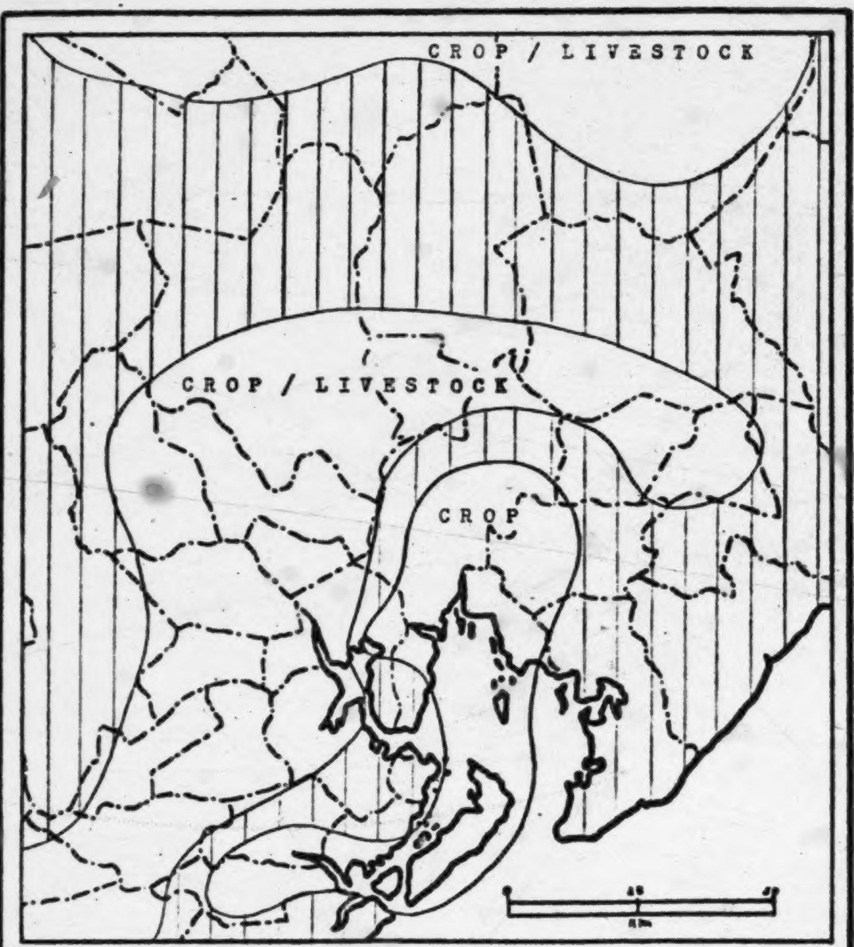
Crop Cultivation and Crop-Livestock Enterprises--1940

Source of data: *Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia, Vol. II.*

MAP 103

1:Haskins K-4,5 (1952-1954) 1956 SO11 Bahia Brazilians SO11

*702
241
231
233
● 311


CROP / LIVESTOCK
CROP / LIVESTOCK
CROP

RECÔNCAVO OF BAHIA

Regional Pattern of Specialized Agricultural Enterprises

Crop/Livestock - Area in which crop-livestock enterprises predominate
Crop - Area in which crop enterprises predominate

MAP 104

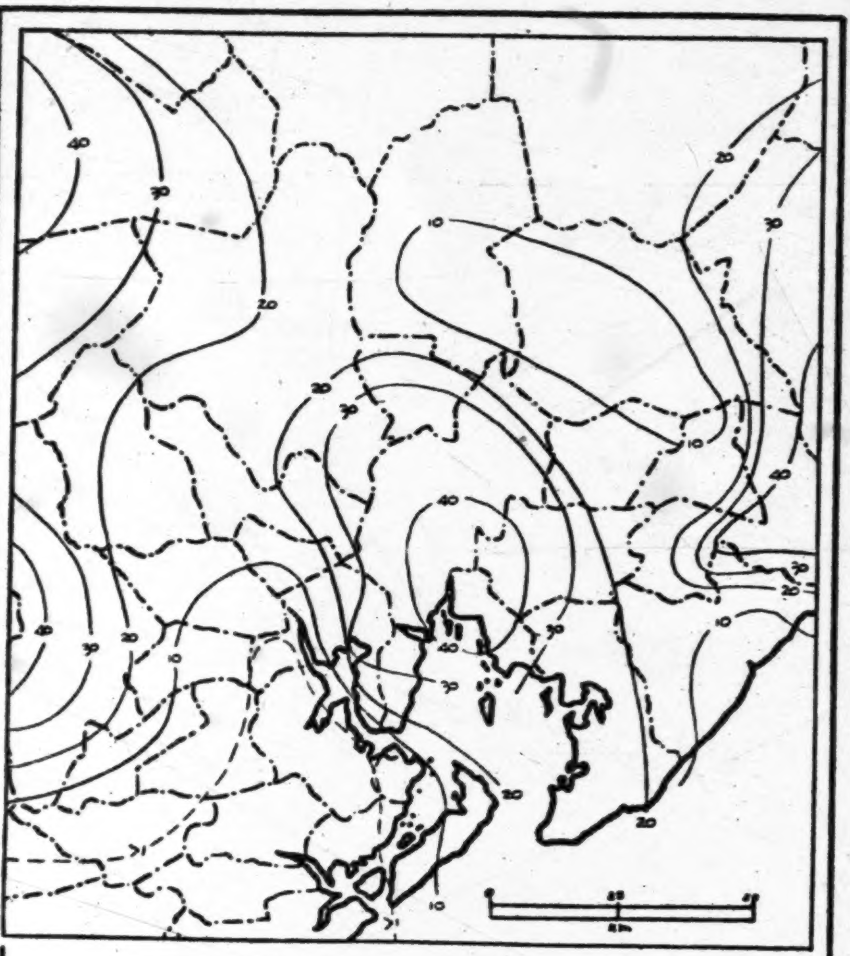
241 231 233 311 Mixed crop and livestock units dominated the agricultural land of an inverted "L shaped" zone which began in the southwest and which, in the Recôncavo, coincided approximately with the tobacco-manioc region. Mixed crop and livestock units also dominated in the drier taboleiros north of the Recôncavo. The intermediate zone between the crop and crop-livestock regions within the Recôncavo was relatively narrow, conforming to the pattern of rapid transition from sugar cane to tobacco and manioc north of the Rio Paraguaçu. The outer transition zone, in which no single property type dominated, included the outer 231 233 margins of the Recôncavo except in the southwest. Purely livestock-producing units did not dominate the agricultural land of any extensive area within or adjoining the Recôncavo.

241 311 423 The regions delimited above on the basis of the relative area in the two types of crop-producing units had additional significance in terms of the distribution of large-scale and small-scale enterprises (Map 105). The mixed-unit region, in which manioc and tobacco are so important, had only limited areas in large properties—usually 5 per cent to 20 per cent of the enumerated area. There were few large properties in the southern part of the crop unit region also, but in the sugar cane area north of the Bay over 40 per cent of the enumerated area was in large properties. These regional patterns of property types conform to the distribution of mean property size (Map 106); the mixed-unit region had mean properties of 10 to 20 hectares in the Southwestern Recôncavo and 20 to 30 hectares north of the Rio Paraguaçu, while the mean property size in the sugar cane area exceeded 100 hectares.

241 423 Size of Agricultural Properties. As has been seen, the agricultural properties of the Recôncavo are highly diverse in size, as is to be expected in an economy dichotomized into the predominantly

[TEXT CONTINUED ON PAGE 318]

*102
241
● 311
423


40
30
20
10
20
30
10
30
20
40
10
40
30
20
10
40
30
40
30
20
10
30
20
10
20
20
10
0
25
50
Km

RECÔNCAVO OF BAHIA

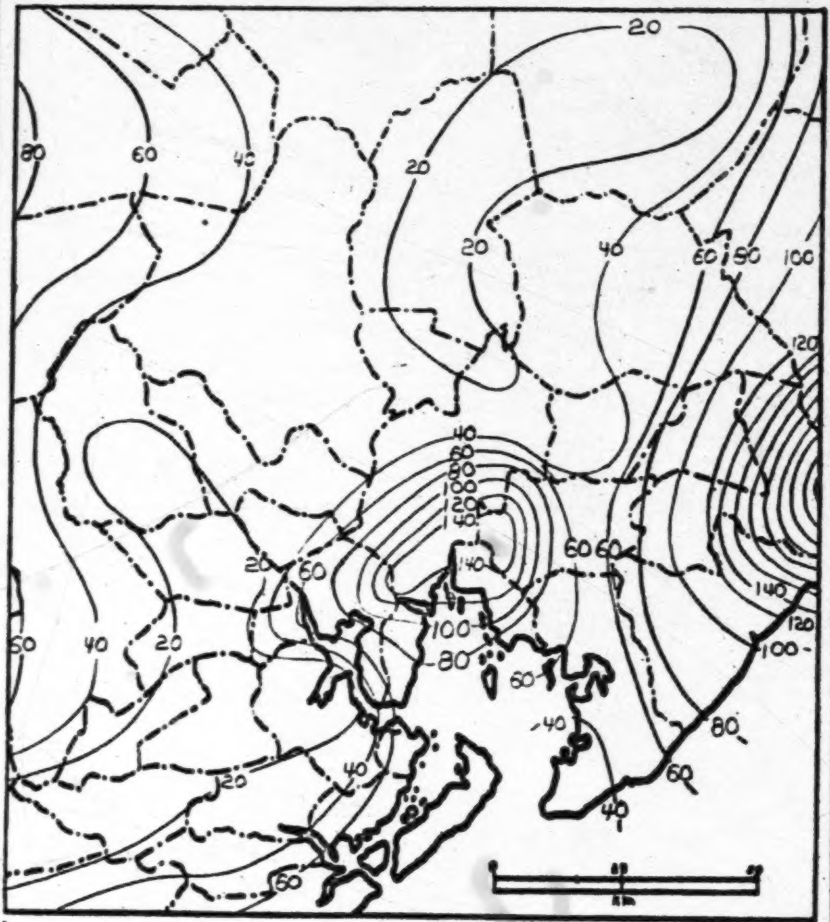
Per cent of the Enumerated Area in

Large-Scale Enterprises--1940

Source of data: Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia, Vol. II.

MAP 105

102*
241
311
423


20
80
60
40
20
20
40
60
80
100
120
40
60
80
100
120
140
140
60
60
20
60
140
120
100
100
80
60
60
40
40
60
40
20
20
40
80
60
40
60

RECÔNCAVO OF BAHIA

Mean Size of All Agricultural Properties—1940

In Hectares

Source of data: Recenseamento Geral do Brasil, 1940. Censos Econômicos. Bahia. Vol. II.

MAP 106

BB 245 433 439 come to be the area of the greatest value of agricultural production in the state—Cr.$1,007,824,000, in 1948, almost three times the value of
B crop and livestock production in the Recôncavo, Cr.$335,000,000. The
BB 231 233 433 total value of livestock production in the Recôncavo is estimated to be about Cr.$60,000,000 for 1948. Although no comparable figure is available for Brazil, probably the Recôncavo had less then 1 per cent of the livestock and thus produced less than 1 per cent of the value of livestock in the nation as a whole.[1]

B BB 433 The present inferior position of the Recôncavo is in part a reflection of the relative decline of the region in the nineteenth century discussed in the chapter on the evolution of the Recôncavo. However, the Recôncavo continues to lag behind in the contemporary development
B BB 241 249 433 [458] [650] of Brazil. From 1944 to 1952 the total cruzeiro value of the principal crops of Brazil increased four-fold, while the value of Bahia's tobacco crop, a good indicator of the economic shifts of the Recôncavo, increased by only one-fifth despite the concurrent inflationary spiral. Even the government-stabilized sugar industry of the Recôncavo produced only three and one-half times its 1944 value. Although the above increases are more indicative of the steadily declining value of Brazilian currency than of true economic development, they are an index of the relative importance of agriculture in the Recôncavo to the national economy.

BB 249 244 433 311 Tobacco, sugar cane, and manioc, which occupied 70 per cent of the Recôncavo's cropland, accounted for 77 per cent of the total value of all principal crops in 1948 (Table XVI). Each of the three crops contributed at least 20 per cent of the value of all crops, while no other crop produced over 6 per cent of the total. The cruzeiro value of these principal crops, and of livestock, and their relative position within the nation has been given in Table XV, above.

TABLE XVI

RELATIVE CROPLAND AND VALUE OF ALL CROPS OF THE RECÔNCAVO WITH A VALUE OF MORE THAN Cr.$1.000,000 IN 1948

241
433
• 311

Crop	Per cent of the Cropland of the Recôncavo	Per cent of the Value of All Principal Crops of the Recôncavo
Tobacco	27	32
Manioc	28	25
Sugar Cane	15	20
Beans	9	6
Oranges	1	5
Bananas	1	3
Corn	12	3
Coconuts	1	2
Coffee	4	1
Pineapple	<1	<1
Peanuts	<1	<1
Sweet Potatoes	<1	<1

Source: Calculations and estimates based on data from Produção Agrícola: 1948.

249
433
[311]
[435]

The leading position of tobacco results in part from its extensive cultivation, and in part from its relatively high unit value. While the mean value of production of all crops in the Recôncavo was Cr.$3,400 per hectare in 1948, tobacco produced Cr.$3,900 per hectare, as given in Table XVII, which also shows the value of production per hectare of the other principal crops. The leading position of tobacco is at variance with tradition which, as has been seen, assigns the first rank to sugar cane. Not only was tobacco the most valuable crop of the Recôncavo in 1948, but it was also the leading crop in seven municípios of the tobacco-manioc region, where it accounted for a minimum of 40 per cent of the value of all crops. Within four separate municípios of the crop region, it accounted for about 60 per cent of the total value of crops (Map 120). The Southwestern Recôncavo was the chief center of the production of tobacco, as indicated by value as well as by cropland and bulk, for it produced over 63 per cent of the total value of tobacco in the Recôncavo. Within this section, Cruz das Almas was the

[TEXT CONTINUED ON PAGE 347]

CHAPTER XI

CONCLUSION

128 In the preceding chapters the results of a statistical appraisal
and a field investigation of agriculture in the Recôncavo have been presented.
As a conclusion it seems appropriate to: (1) summarize the findings;
and (2) discuss the potentialities of the Recôncavo for agricultural
development

433 Like most of the densely-settled east coast of Brazil, the
241 Recôncavo is engaged primarily in the production of crops. This is true
not only of the region as a whole, but also of each of its individual
parts excepting only the area around the cattle market town of Feira de
241 Santana. The total cultivated area of the region, about 6.4 per cent
311 of the land surface, was almost evenly divided in 1948 between purely
commercial crops--tobacco, sugar cane, coffee, oranges, and coconuts--
and subsistence-commercial crops--manioc, corn, beans, bananas, peanuts,
and sweet potatoes. About 70 per cent of the cropland was used for the
three predominant crops--manioc, tobacco, and sugar cane. Livestock production
231 233 is associated with crop cultivation in many parts of the
241 Recôncavo, but the region is also dependent upon the sertão of Bahia
for livestock, which are driven into Feira de Santana and are used in
several different areas within the region.

249 The three principal crops as determined by cultivated area--
244 433 tobacco, manioc, and sugar cane--accounted for 77 per cent of the total
value of crops in 1948, and no other crop accounted for more than
[231] 6 per cent of the total value. Thus agriculture in the Recôncavo is
[233] primarily concerned with these three crops and with the production

249 311 [134] Commercial sugar cane cultivation is confined to the humid Coastal Plain areas with Cretaceous clay soils, except for a small area in São Filipe. Since the areas of Cretaceous clay soils are limited and compact, sugar cane production is highly localized in two areas: (1) the main sugar cane area in the municípios of Santo Amaro, São Francisco, and São Sebastião; and (2) a smaller area north of the Bacia do Iguape in the município of Cachoeira. There is a third area of less intensive production in southern São Filipe.

249 244 [433] The sole purpose of cultivation in the sugar cane area is the production of a commercial product, but the areas of tobacco-manioc cultivation produce both a staple food and a commodity for sale outside the region. Most of the tobacco and manioc of the Recôncavo are produced under a land rotation system in which the sequence is: (1) tobacco; (2) manioc; and (3) fallow in wild vegetation. The tobacco is planted in small fields, usually after an application of manure. The entire plant is harvested repeatedly until it will no longer produce a salable leaf. Manioc is planted following tobacco, sometimes several times, until the field is exhausted and abandoned to the second growth. The fallow period is frequently short, sometimes as little as one year. Cultivation is entirely by hand--no plows are used. There is very little selection of seed, and only one variety of tobacco--Bahia Brasil--is [423] [427] produced. Tobacco and manioc are produced almost exclusively by small cultivators who are either owners or renters. Frequently livestock [231] [233] are raised upon the properties of the cultivators, but except for the use of manure in the cultivation of tobacco, there is little integration of crop and livestock production. The leaf is harvested, dried, 276 and partially fermented by the cultivator. The marketing of tobacco 276 438 [452] [488] is inseparable from the credit arrangement between the cultivator and the tobacco buyer or agent. The leaf is delivered by the producer to the storekeeper-buyer or the local tobacco warehouse.

000 258 438 the storekeeper-buyer or the local tobacco warehouse. The roots of the manioc are processed locally, in casas de farinha, and the farinha de mandioca is sold in the local market or to storekeepers in the nearby village or town.

249 244 311 134 The sub-region of tobacco and manioc production occupies the humid eastern and southern edges of the Uplands. The chief center of production, the Southwestern Recôncavo, occupies a zone of deep, sandy and sandy loam soils lying in flat-surfaced uplands above crystalline rocks. The northern parts of the tobacco-manioc sub-region occupy the rough, dissected southern edge of the sandy Tertiary taboleiros--in this northern area the production of both crops is less intensive than in the Southwestern Recôncavo. The area of primary tobacco and manioc production generally conforms to the forest and scrub forest transition and is expanding southwestward beyond the traditional Recôncavo along this [433] [178] physical boundary zone. The intensity of production is also increasing, but with violent year to year fluctuations.

241 433 In addition to sugar cane, tobacco and manioc, other subsistence and commercial products are grown in the Recôncavo. The most important of these are corn and beans, grown as commercial and subsistence crops in the north and west of the region, and coconuts, which are produced along the beach line. Bananas, sweet potatoes, and peanuts are grown in most parts of the Recôncavo, but on a small scale.

241 311 137 There are several areas in which there is little or no cultivation. The rougher Intermediate Hills, which are forested, separate the sugar cane sub-region from the tobacco-manioc sub-region. The lowland areas of Tertiary and crystalline soils are also forested and are cultivated under a non-intensive land rotation system with some associated 241 livestock. The Recôncavo is distinguished from the surrounding areas by its relatively greater mean intensity of cultivation. In the

249 471 433 these individual shortcomings of the industry are less important than, and to a certain extent derived from, three basic problems of the sugar economy: land, market, and leadership.

249 [311] Most of the area of Cretaceous soil in the lowlands of the Recôncavo presently is occupied by sugar cane or by the fallow fields. Only those lands which are too wet or which are needed for settlement, mills, or transportation are not used for cultivation. Thus there seems to be little opportunity to increase the area of good sugar cane land. It would presumably be possible to reduce the fallow period by lengthening the period of ratoon harvests or to abandon the fallow period altogether. If, as seems likely, these changes would reduce the yield of cane, then it would be necessary to begin to use expensive imported fertilizers in order not to lose the advantages gained by increasing [242] the intensiveness of cultivation. The introduction of high-yielding Javanese varieties of cane has already been attempted, but because of climatic conditions, soil deficiencies, poor cultivation practices, or a combination of these factors, yields remain below East Indian levels. [134] It is theoretically possible that sugar cane cultivation could be extended to the other soils of the lowland--the Tertiary sandy soils and the crystalline soils of the peninsula and of the Intermediate Hills west of the Bay. Both of these soils, however, are relatively infertile, and the sandy soils are particularly unsuited for cane because of their poor retention of water. Sugar cane cultivation is not practical on the Uplands on account of the low precipitation--cane can be grown in only a few damp valleys of the Uplands.

175 249 439 The second great disadvantage of the sugar cane industry of the Recôncavo is in its market relationship. The history of the sugar cane economy of the region may be summarized as follows. At the end of the sixteenth century the forty engenhos of the Recôncavo exported 1,800 tons

249 purchased in Europe at the expense of precious foreign exchange, tobacco
[457] can be processed for the trade with only a shed and a few crude presses.
[489] Rather than a relatively expensive rail net to assemble the crop, tobacco can be carried by truck, small boat, or even by pack animal. More-
[433] over, since the cultivation of tobacco is integrated with the production of food and is primarily an activity of small farmers, it is possible to adjust the size of the crop from year to year with a minimum sacrifice of capital investment.

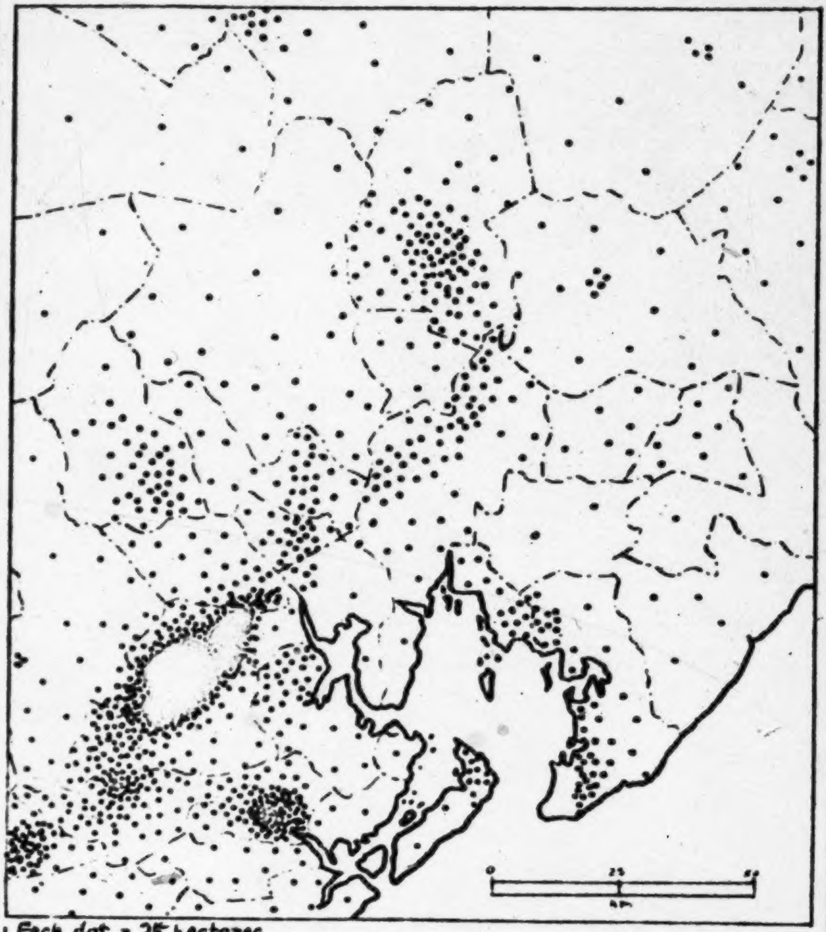
277 The tobacco industry of the Recôncavo has a number of disadvantages as a base for commercial development which may be summarized as problems of: (1) land; (2) markets; and (3) system of production.
249 Leaf tobacco production in the Recôncavo and in the adjoining areas of
311 Bahia is confined to a narrow belt between the humid edges of the Up-
[134] lands and the dry interior of the state. An expansion toward the coast would bring tobacco first into the Intermediate Hills where the upland soils which are preferred for tobacco cultivation are of limited area and then into the humid lowlands in which the Cretaceous soils are unsuitable, apparently, for the cultivation of quality leaf tobacco.
[132] and in which the Tertiary soils are extremely infertile. An expansion westward would bring tobacco into an area where the precipitation in
[134] most years is inadequate. The interior north of the tobacco area is dry and has very poor soils, the Tertiary upland soils. There is an
[137] opportunity for the further expansion of the cultivation of tobacco toward the southwest along the forest and scrub forest boundary into a region which produces the same general type of tobacco as the Southwestern Recôncavo--the "Mata" grade. This apparently is the meaning of the increased tobacco production in Santo Antônio. It should be possible, at least as far as the soils and climate are concerned, to continue the expansion toward the southwest into the adjoining

249 311 [245] municípios. However, in this southwestern area the amount of flat land is progressively reduced as the serras of the coffee zone are approached. Moreover, this region is already occupied by the other commercial systems--coffee, and in a few areas, sugar cane. Thus tobacco would not be moving into an area in which it could have either the land or the labor force without a struggle.

277 439 Leaf tobacco has a number of disadvantages as a primary commercial product. The Brazilian market for Bahian tobacco is not yet large enough to stabilize the price during years when it is impossible to sell leaf abroad. In Europe the tobacco of Bahia must compete with leaf from other parts of the world, and because the Recôncavo has not yet succeeded in producing a suitable high quality wrapper leaf, it cannot hope to secure the whole market no matter how great its quantity of production. One of the possibilities which is being considered by the tobacco industry is the production of wrapper tobacco, but the experiments which have been completed so far have not been highly successful. Even if the quality of the tobacco were improved, one basic market problem would remain--tobacco is a luxury product, and many countries find it possible to do without it in times of war or economic distress.

249 The basic problem of tobacco production in the immediate future seems almost certain to be the system of cultivation and the land system with which it is connected. As has been seen, in the main centers of production the fallow period is already extremely short. It is not unlikely that the cumulative effect of too short a rotation period under a system of land rotation will reduce the fertility of the soil to a point where normal second growth will not develop and where land rotation, especially with so demanding a crop as tobacco, will be impossible. Moreover, if the intensity of tobacco cultivation should increase, then it seems inevitable that the density of livestock within

+102
244
• 311



Each dot = 25 hectares

RECONCAVO OF BAHIA

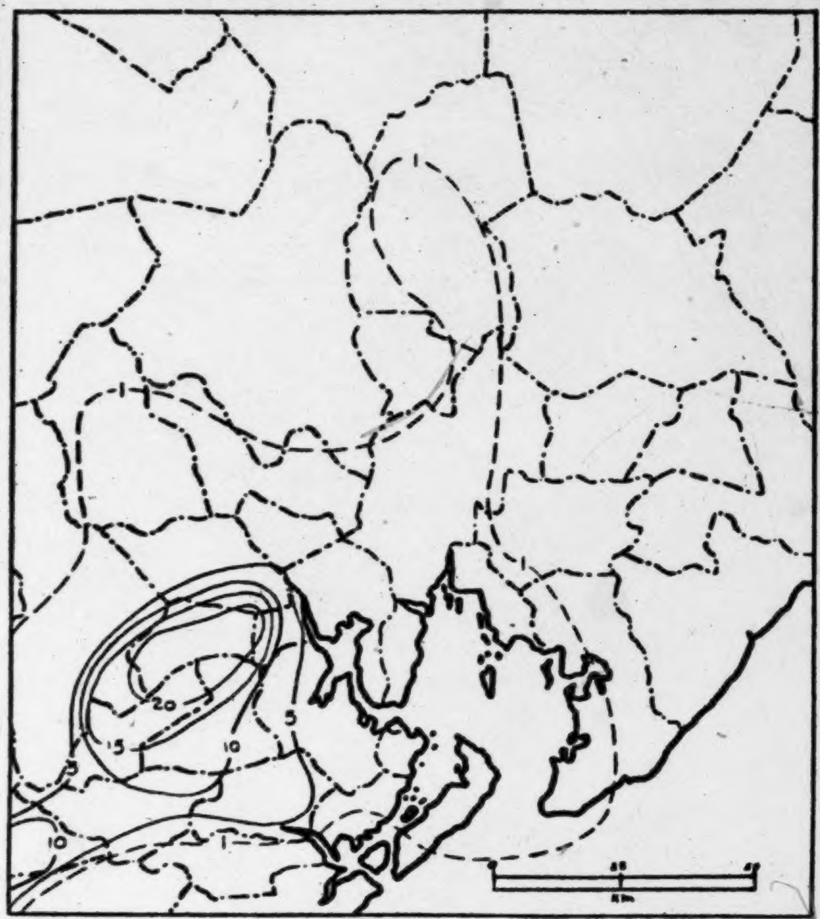
Area in Manioc--1948

(Based upon un-corrected official data)

Source of data: Produção Agrícola: 1948.

MAP 131

*702
244
311



RECÔNCAVO OF BAHIA

Hectares of Manioc per Square Kilometer of Total Area—1948

(Based upon un-corrected official data)

Source of data: *Produção Agrícola*: *1948*.

MAP 132

APPENDIX E

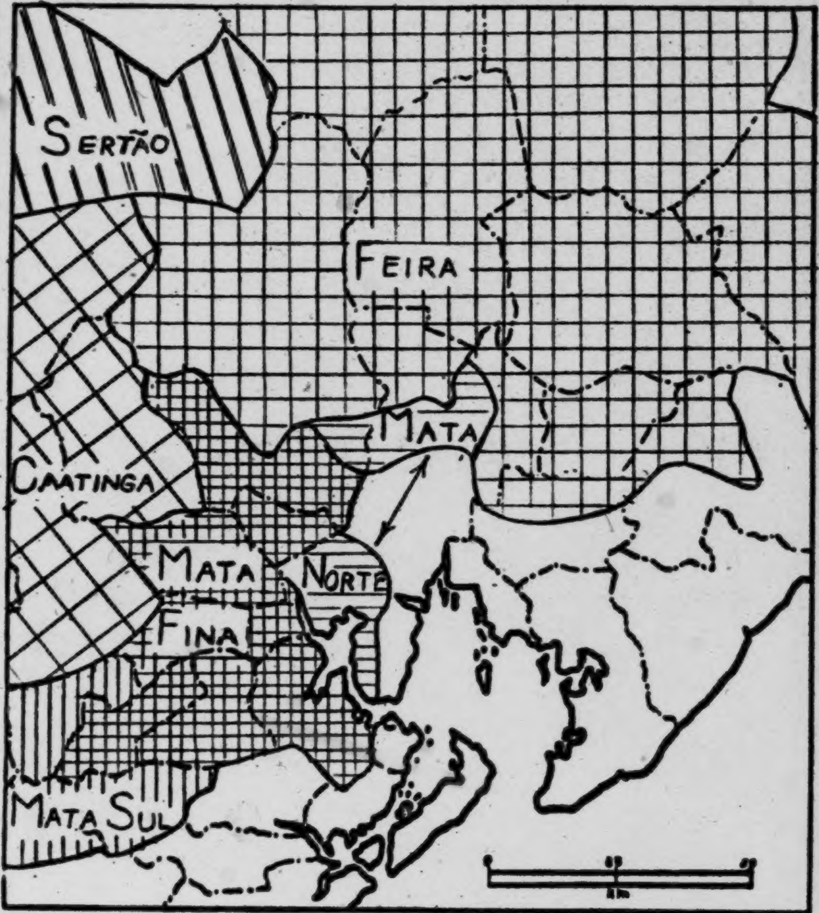
Tobacco Zones of Bahia

249 659 311 The tobacco industry, the exporting houses, and the official tobacco organizations of the government have divided the entire leaf tobacco producing area of Bahia into four zones on the basis of the kind of tobacco produced. None of these zones even approximately coincides with the Recôncavo, but three of the four include Recôncavo *municípios*, while the edge of the fourth touches upon the region. These four zones, in order of approximate relative value of their leaf, are "*Mata*," "*Feira*," "*Caatinga*," and "*Sertão*." Many different types and grades are included in "*Sertão*." The accompanying map (Map 136) shows the relationship of these zones to the Recôncavo.

249 311 "*Mata*," the most valuable, is a good burning, light to medium tobacco which can be used after twelve months of curing. Very often it is worth twice as much as the next grade. The "*Mata*" zone stretches from northern Santo Amaro to the southwestern extreme of the coffee zone. It is divided into three parts—*norte*, which includes northeast Santo Amaro, southeast Feira de Santana, and Cachoeira; *sul*, which includes southern Castro Alves, southern Santo Antônio, São Miguel, and the *municípios* to the southwest; and *fina*, which includes São Gonçalo, Conceição da Feira, Muritiba, Conceição do Almeida, Cruz das Almas, São Filipe, São Félix, Maragogipe, and northern Santo Antônio. The greatest premium within the *Mata Fina* grade is given for Cruz das Almas leaf, although São Gonçalo leaf also is highly valued. In addition to the intrinsic value of the leaf, "*Mata*" tobacco is valuable because of its uniformity, both from area to area and from year to year. In part this uniformity results from the fact that it is grown upon similar

[TEXT CONTINUED ON PAGE 420]

*702
249
• 311


SERTÃO
FEIRA
MATA
CAATINGA
MATA
NORTE
FINA
MATA SUL
0
Km

RECONCAVO OF BAHIA

Official Zones of Tobacco Production

Grades of Bahia-Brasil Leaf

MAP 136

249 311 soils under more dependable rainfall conditions than are characteristic of the other zones.

The "*Caatinga*" zone includes Santo Estêvão, Castro Alves, Ipirá, and Santa Teresinha--the *município* west of Castro Alves. When the rains [132 134] of the growing season--June, July, and August--are plentiful, these tobaccos are much like those of the "*Mata*" zone, though somewhat harsher--probably because of the more saline soils. If precipitation is scarce, the tobacco is gummy and requires long curing--two years or so--before use. If the rains fail entirely, a second attempt may be made to plant during the summer rains of November, December, and January.

The "*Feira*" zone includes Feira de Santana, Coração de Maria, Irará, Alagoinhas, Catu, Pojuca, northeastern Santo Amaro, and northern São Sebastião, as well as Inhambupe, Entre Rios, and Serrinha. "*Feira*" leaf is often large, rather dark, and moderately strong, and requires [132] at least two years for curing. Like the "Caatinga," its quality varies in response to changes in precipitation, but in general it is more uniform.

"*Sertão*" tobacco is highly diverse in type and quality. Its zone of production is large in size, extending west to the Chapada Diamantina and southward beyond the Rio de Contas. Generally this leaf is large and coarse, but as a result of the diverse physical conditions in the scattered areas in which the crop is produced, the quality of the leaf is variable over a wide range.

APPENDIX F

Comparison of 1940 and 1948 Data for Cultivated Areas

241
311
127
128

The figure for cropland in 1948, derived from the total area in principal crops, is less than half the total cultivated area which is given in the 1940 Censos Econômicos, as shown on the table which follows (Table XIX). The development of the individual crops, indicated by the statistical material available and by the situation which is to be observed in the area, indicates quite clearly that the catastrophic decline which these figures would seem to indicate has not in fact taken place. The growth of the population of the Recôncavo, without concurrent industrialization or radical reorganization of the agricultural system, has required the expansion, not the contraction, of the cultivated area. It is clear that the 1940 census data must have included much land that was not in crops--probably it included those areas which customarily were cultivated under the land rotation system but which were not, in 1940, in crops. Since the census was based upon the opinion of the agriculturalist as to the cultivated area and since it is the custom to regard fields recently abandoned as cultivated land, it is easy to see how the 1940 figure was so large. It is assumed, therefore, that the 165,235 hectares which the census called cultivated area in 1940 corresponds to the general area in which cultivation was customary and not to actual cropland.

TABLE XIX

COMPARISON OF LAND CULTIVATED AS GIVEN IN THE 1940 CENSUS AND AS CALCULATED FROM 1948 CROPLAND DATA

241
• 311
127
128

	Land Cultivated 1940	Land Cultivated 1948	Change
Central Recôncavo:			
Santo Amaro	19,252	8,417	-10,835
São Francisco	3,227	1,063	- 2,164
São Sebastião	4,798	2,516	- 2,282
Cachoeira	4,326	1,154	- 3,172
Northern Recôncavo:			
Coração de Maria	4,653	1,092	- 3,561
Irará	27,630	9,115	-18,515
Alagoinhas	3,868	2,464	- 1,404
Northwestern Recôncavo:			
Feira de Santana	20,457	3,994	-16,463
São Gonçalo	4,270	3,614	- 656
Conceição da Feira	2,363	1,343	- 1,020
Santo Estêvão	10,145	8,500	- 1,645
Southwestern Recôncavo:			
Muritiba	7,654	3,333	- 4,321
Cruz das Almas	8,585	12,796	+ 4,211
Conceição do Almeida	11,419	7,506	- 3,913
São Filipe	5,942	6,430	+ 488
São Félix	3,482	1,512	- 1,970
Eastern Recôncavo:			
Catu	5,484	741	- 4,743
Pojuca	1,037	259	- 778
Southern Recôncavo:			
Maragogipe	7,221	1,342	- 5,879
Itaparica	4,492	891	- 3,601
Salvador	4,930	1,921	- 3,009
Recôncavo Total	165,235	80,003	-85,232

Source: Recenseamento Geral do Brasil: 1940. Censos Econômicos, Bahia, Vol. II, and Produção Agrícola: 1948.

1. Sugar Country

THE REGION of Brazil in which this study was made is a small area in the state of Bahia called the Recôncavo. This is the land surrounding the Bay of All Saints, a fertile basin extending inland no more than 40 kilometers at the most. Situated on a high bluff overlooking the entrance to the Bay of All Saints is Salvador, the capital of the state of Bahia, generally referred to as Bahia, or "the capital," or simply "the city." After Salvador was settled in 1549, the colonization of the Recôncavo proceeded at a rapid rate. Since early in the colonial period, the Recôncavo has been divided into three distinct areas: a southern area devoted mainly to the raising of manioc, the food staple of much of Brasil; a western section devoted to the cultivation of tobacco; and a northern and eastern area, given almost exclusively to large-scale sugar-cane monoculture. This study was made in the third zone, the one producing sugar cane. 101 [133] [361]

The region, which can be called the "sugar-Recôncavo," partakes of the long tradition of sugar-cane growing which formed the basis for the early colonization of Brasil. A narrow strip of land along the northeast coast of Brazil in what are now the states of Pernambuco, Sergipe, Alagoas, and Bahia was the focus of the economic, political, and social life of the entire colony. This region, under the colonization of the Portuguese, produced a large part of the world's sugar supply at a time when sugar was a great luxury in Europe. The northeast coast of Brazil became an exceedingly prosperous part of the colony early in its history. Salvador, in Bahia, and Recife, in Pernambuco, became the most impor- 175 311 249

175

311 tant centers of colonial life, and until 1763 Salvador was the [249] capital of the Portuguese colony.

The Recôncavo helped to make Brazil a unique part of the Portuguese empire in the sixteenth century. Brazil was different from any of the other Portuguese colonies, for its wealth proved to lie in agriculture rather than in trade, as 133 was the case in India and Africa. The Bay of All Saints, with a circumference of 200 kilometers, is in effect an inland sea, [361] the entrance to which can be guarded from the heights on which the city of Salvador is situated. There are a number of picturesque islands throughout the bay, with good beaches and landing facilities. Many small rivers empty into the bay, and numerous creeks navigable at high tide extend further inland [487] along its shores. The presence of such a large network of navigable waters was an important factor in the rapid development of the Recôncavo, providing easy and inexpensive transportation of sugar to the point of shipment to Europe.

132 The climate is semitropical, with two seasons. Summer, from September to sometime in March, is relatively dry, dotted by showers and thunderstorms and cooled by fresh breezes blowing in from the Atlantic. Winter begins in April, lasting until August or September, the exact time of change differing from year to year. This season is marked by continued rain, usually a soft, constantly falling drizzle or light rain, interspersed with heavy showers, as front after front moves in from the Atlantic, dropping its moisture before being pushed upward by the abruptly rising land which surrounds the Recôncavo. According to statistics for the years 1914 to 1938, the months of minimum rainfall are October, November, and December; during this time the average rainfall was 11.81 inches. The period of maximum rainfall is April, May, and June, with an average of 35.83 inches for the three-month period. The yearly average from 1914 to 1938 was 65.93 inches.[1] The temperature range is from 70 to 90 degrees Fahrenheit.

134 The soil of the Recôncavo, especially that of the sugar-Recôncavo, is extraordinarily fertile. It is a heavy black soil, known as massapê, approximately 6 inches to 2 feet thick, covering a clayey subsoil, known locally as tauá. Here and there are outcroppings of sand and mixtures of sand with clay.

---

[1] Atlas pluviometrico do Brasil (Rio de Janeiro, 1914-1938).

361
*249 is located at the water's edge on one of the six plantations;
three belong to different members of another family related
to the sugar factory owners through marriage; one belongs
individually to a member of the family owning the factory; and
the last one belongs to a nonrelative, a mestiço (person of
mixed racial descent), who is socially reticent but considered
[871] an astute businessman. Within the area there is also a fed-
eral school which has a large expanse of noncultivated land.

361 The pattern of settlement on the plantations is that of a vil-
lage. The homes of the cultivators are grouped in a cluster
apart from the land they work, the point of orientation being
the owner's home. "Although the village settlement as repre-
sented by the homes of the small-farming classes is hardly to
be found in Brazil, the village manner of arranging the pop-
ulation on the land is widely used on the large estates that are
prominent throughout the Brazilian countryside. For the most
part the fazendas and usinas of Brazil utilized this nucleated
form of settlement in their 'quarters' or 'colonies' for the
workers who till the crops."[6]

162 The population of the rural zone of the community of Vila
Recôncavo is 2,800, of whom 500 live at the sugar factory nu-
cleus; on each of the sugar-cane plantations there are between
*249 150 and 200 persons. Traveling about from one plantation nu-
cleus to another, one sees no sign of habitation, for the coun-
• 311 try is devoted to intensified sugar-cane cultivation. Fields of
sugar cane, 10 to 20 acres in size, alternate with pastures--
fields which are being rested for three or four years. Each
private plantation has a section of forest to produce firewood
and lumber. The factory plantations, however, for the most
part are entirely cleared, as the corporation owns another
plantation on the other side of the Recôncavo which is used ex-
clusively for raising and pasturing cattle and for supplying
*249 firewood for the large fires of the factory. Land divisions or
[423] boundaries are generally long lines of graceful bamboo trees
which also supply fence posts. On each plantation can be seen
the remains either of the old sobrado or of the antique mill
(engenho) or chapel (capela), and in some cases the sobrado
is still in good repair and inhabited by the owner.

312 The Recôncavo is not blessed with abundant fresh water.
The rivers are few and small, prone to dry up in the hot sum-

---

[6] T. Lynn Smith, Brazil (Baton Rouge, 1947), p. 396.

VILA RECÔNCAVO

[The Usina]

the factory is undergoing a reformation which will raise its 249* capacity to over one hundred thousand sacks, and the legal 433 capacity will be readjusted.

Usina São Pedro, although the smallest, is representative 249* of the others and experiences the same problems and difficul- 473 ties. It differs from some in that it is a family enterprise. The stockholders are nearly all members of the Conde fam- [653] ily, and the operations are directed by two members of the family. The factory itself was one of the three built by the [423] state government in 1900 on land controlled by the Navy,[5] on the edge of the Bay, which provides excellent year-round transportation facilities. The mill was acquired in 1909 by the Conde family with two plantations, to which the family has since added four other contiguous plantations. The corporation has a total area of slightly over four thousand acres, mostly of rich massapê soil. The factory receives cane from the plan- 249* tation of Dona Sinhá, who is also a member of the Conde family by birth and by marriage. It also gets cane from four other [602] plantations within the community and four outside the community, which send their cane by the traditional sailboat. In ad- [423] dition, the factory owns a 2,324-acre plantation in the coun- [505] ty of Purificação which is used for grazing and raising cattle and for supplying wood for the factory fires. There is direct water transportation between the factory and the plantation in Purificação.

The designation usina has several meanings which are quite 249* similar to the meanings of the older term, engenho. In its 192 larger context, usina means the entire land-factory combination, including the mill and all the plantations belonging to the corporation. More specifically, usina means the factory building itself. In another context, usina simply indicates the population nucleus, including the factory, the owner's house, and the other buildings.

The usina or factory nucleus roughly follows the same set- 249* tlement pattern of the old plantations. The point of orienta- 361 tion is the factory building, near which stand the chalet and other homes of the owning family, which are grouped togeth- [178] er in a park of royal palms and mango trees. Usually a small chapel or oratory is included in one wing of the chalet, where

---

[5] The shoreline bordering salt water is controlled to the [311] depth of 33 meters by the Brazilian Navy.

[The Usina]

*
249
463 seer is entitled to the same rights and privileges as any other
worker: a house, land on which to grow subsistence crops,
466 and the use of the owner's pastures for his oxen, burros, and
horses. The horses used in his work are supplied by the cor-
[492] poration, as are those of the other overseers. His salary is
high: Cr$2.000,00 a month, plus a bonus of one cruzeiro for
[465] each ton of cane produced on all six plantations. The regional
overseers receive Cr$800,00 a month, plus a bonus of half a
*249 cruzeiro per ton of cane produced on their plantation. Seu
463 Pipiu has been general overseer of Usina São Pedro for twenty-five
years, during which time he has accumulated a good
159 deal of property. He is a mulatto, somewhat lighter skinned
than the six administrators who are under him. Two of his
[427] sons work in the factory office, and a third runs the store on
one of the plantations. In addition he is a small farmer, renting
some forty acres from the factory, on which he plants
sugar cane. He pays 25 per cent of the harvest to the factory
for the use of the land.

*249 The usineiros have the same complaints against their general
overseers that private plantation owners have against
466 theirs. At the same time, after many years of service such
an official becomes indispensable, or is thought to be, and is
allowed to go his way--quiet, well dressed, well mounted,
ruler of all he surveys--while the usineiro watches and mutters
to himself.

*249 So far the rural properties of the factories have led the private
[184] plantations in the field of mechanization, as they have
greater funds for purchasing equipment and can get more use
out of each piece. Mechanization, however, is used as yet
only in preparing the soil for planting. The ground is plowed
and replowed, and grooves are made to receive the cane
shoots. Also, planting in unplowed land is still common--
grooves are opened for the seed with the simple plow, and no
soil preparation is done at all. Here mechanization ends, and
[496] all further cultivation, as well as the cutting and harvesting
of the cane, is done by hand. Narrow-gauge railway tracks
[493] reach out from the mill to loading points on the six plantations,
where the cane is transferred from the oxcarts to the
● [311] railroad wagons to be drawn to the mill. Approximately two
thousand acres are under cultivation; the remaining land is
used as pasture or as garden plots by the workers, in accordance
with a rotation system.

000 Financially the two units--factory and plantation--are run

VILA RECÔNCAVO

[Town Life]

Because there are only 265 241
acres of manioc under cultivation in the entire county, pro- 43
duction is far below the amount of farina consumed, and it is
necessary to import the milled manioc tuber which constitutes [262]
the major dietary item of the people. In 1951 a municipal law
was passed prohibiting the exportation of farina. Three times [114]
during the author's stay in the town there was a pronounced
lack of farina, when there was almost none to be bought and [731]
its price per liter rose from one to three cruzeiros. That
year's drought was also partly responsible for the shortage.

Bananas are the only commercial export crop of the gar- 245
deners. There are approximately 15,000 banana trees in the
county, producing for the commercial market an annual pro- 43
duction of 177,000 arms (cachos) of bananas, providing an in- [442]
come of Cr$500.000,00. The fruits are sold to a middleman
from Bahia who knows most of the gardeners in the area. Once
a week, or every two weeks, he arrives at the town in a large
sailboat to receive the fresh bananas, which he then takes to
Bahia and sells. Sometimes a gardener sells an arm of bananas
to a woman in town who then resells them to townspeople. Few
people in town have to buy them, however, for each household
has at least one banana tree in the back yard. An acre of land [311]
supports about 144 banana trees, which when well cared for
produce 1,500 arms a year. The fruits are sold in cargoes
of fifty arms at Cr$160,00 a cargo, so that one acre earns
about Cr$5.000,00 a year. This sum is almost entirely prof-
it, for gardeners do most of their own work, except when they
have too much land for one man to take care of properly.
Hired help is paid in accordance with the service performed: 245
ten cruzeiros for cutting fifty arms of bananas, twenty for 46
transporting them to the dock if the gardener does not have his
own animals, and a hundred cruzeiros an acre for "cleaning,"
i.e., cutting down and burning old stalks and leaves and keep-
ing the weeds cut down.

Manioc presents a slightly different case, for the raw prod- 252
uct must be processed before it is consumed. The manioc root
from which farina is made is the poisonous variety and must
be peeled and grated, pressed to remove the juice, and then
toasted. The final product is a white powder, fine or coarse
depending upon the type of grater used. Most of the local prod-
uct is a coarse type (farinha de guerra). One of the garden-
ers has a flour house where the tubers are converted into [427]
flour. He mills his own manioc there and lets others use the
machinery, charging them one liter of farina out of each ten
they produce.

178
tory and its fields, and who are slowly drifting away from 249*
visiting the factory nucleus.
An overall result of the new conditions between private 571
planters and the factory is a desire on the part of the suppliers
of São Pedro to become independent of this outlet. Several of
the suppliers are shifting their cane to other neighboring factories,
when this is convenient. Most of them are seriously [311]
considering shifting to another crop, as will be described
below; in fact a goodly proportion of land has already been
taken out of sugar-cane production, thus diminishing future
cane harvests and endangering the cane supply of Usina São
Pedro.

What was formerly a peaceful, "all in the family," almost
preservelike area has become an area of tensions and of poor
business, and social, relations. The situation has all the possibilities
of a traditional sugar-cane kind of land capture. The
factory needs land in order to produce more cane so that the
mill can operate at capacity. No one is willing to sell to the
factory, nor even to supply as much cane as he might under
other conditions. But the private planters are dependent upon
the factory, economically and for services. Therefore it is an [452]
easy matter for the factory to make difficulties for the individual
planter, even gradually forcing him into failure, since
the planter operates on credit and has little latitude for even
a single crop failure. Such a failure gives the factory an opportunity [425]
to acquire badly needed lands at a bargain.

The sugar industry in the community of Vila Recôncavo has 178
also undergone changes in the labor aspects, in line with the 249*
entire industry. As was pointed out in Chapter 4, the price
of the sugar cane and the sugar is artificially regulated, and 43
has been rising slowly over a period of years. However, nationwide [656]
social legislation in the past three years has raised
the wages of the workers annually, before the price increases
were granted by the Institute of Sugar and Alcohol. Spiraling [458]
inflation has also helped raise all the costs, of labor, of materials,
and of machinery. Whereas prices for the task done [466]
have always been fairly well regulated, they have recently become
a very strong issue, and there is much worker discontent.
The planter, whether private or corporate, is more than
ever interested in holding down the costs of his labor supply,
since other costs, particularly of machinery and repairs, are
soaring, always narrowing the margin between the total cost
of production and the established selling price.

178 245 439 249* [438]

position of the sugar industry in Vila Recôncavo, is creating considerable interest on the part of the community's planters. Just as sugar cane is limited by soil and climatic conditions, so also is the cacao. There is little fear, therefore, of competition from many other areas. In addition, cacao is exportable, while the sugar of the area is for internal consumption only.

178 249* 245 452 433 [311]

In spite of the attraction of this new crop, there are a number of problems which must be dealt with. First, the details of a change from sugar cane to cacao must be worked out, especially as regards space and financing. The planter must juggle his sugar plantings, pastures, and rotation lands so that he can slowly take out land for preparation for cacao. If he wants to finance the changeover himself, he cannot lessen his sugar production; in fact, he needs more money than before. Banks in general lend on the forthcoming crop; if the crop is reduced, so is the amount which can be borrowed. However, to overcome this, the Institute of Cacao of Bahia is preparing a financing program on a long-term basis. Sugar cane is a perennial, planted one year, bearing for the next three or four years, then ploughed under and replanted. Cacao, on the other hand, is a permanent tree crop which gives its first fruit in five years, reaches maturity in fifteen or twenty years, and then continues to produce annually for sixty to one hundred years. Thus sugar cane is financed on a one-year basis, while initial plantings of cacao must be financed on a long-term basis of ten to fifteen years. The change from a perennial crop to a permanent crop also requires a totally different mental set on the part of the planter.

178 245 242 [434] [434]

Cacao is a "forest crop," which means that it requires shading. Under primitive conditions it is planted in dense tropical forest. In Vila Recôncavo, however, the former tropical forest has been entirely cleared away during the last four hundred years, since sugar cane tolerates no shade. Therefore, before the cacao can be planted, shade must be provided. This is done by planting banana trees and, at fixed intervals, single seedlings of a precocious, long-living, high-growing shade tree. To pay for the work involved it is common to plant manioc between the banana trees. The manioc is gathered the following year, and shortly thereafter the young cacao trees can be planted. The banana trees offer sufficient shade for the young plants. For a period of five or six years the planter

178
315
433
49

travel from the city to the plantations by car at almost any season of the year. It is a two-hour trip, considerably more comfortable than the old system of travel by boat and on horseback. In addition, the roads have made it possible for the planters to transport their cane more efficiently, using trucks and tractor-drawn wagons. Along with this, the refinery has led to greater supplies of diesel oil, gasoline, and kerosene, so that it is no longer necessary to transport these items from the city at great cost and delay.

178
315
311
433
427
[421]

The planters have also profited in another manner. Petrobrás invaded the cane fields in its search of oil. It fenced small areas where it drilled and constructed storage tanks, and it took out of cane production a good deal of land for roads and installations. Recently a basis has been reached for paying the planters in a satisfactory manner for the use of the lands. As a result each planter whose land is partially occupied now receives an annual cash payment based on what the occupied land could produce. As yet no arrangements have been made for the landowners to participate in the profits of Petrobrás, since all subsoil riches belong to the nation, and therefore in this case to Petrobrás.

178
315
571

There has been little social intercourse between the planters and the personnel of Petrobrás, either in the rural area or in the city of Salvador. From time to time the higher echelon employees of Petrobras are invited to larger parties given by the planters, and in return the planters are sometimes invited to parties at the refinery. But the plantation society is so closed and so firmly based on family relationships that it is difficult to maintain steady social relations with newcomers. In addition, the engineers and other specialists of the oil industry are principally oriented toward the capital city, and there is no serious attempt made to establish social relationships with the planters.

The sugar-cane workers for their part are so definitely plantation-oriented that they seek little diversion among the new oil workers. The unmarried field workers of Petrobrás who might be expected to establish relationships with the rural population seldom do so. They live in a fenced barracks area which immediately gives the impression of a group cut off from the rest of society. When they do seek entertainment they go as a rule to the factory nucleus, or to the town of Vila Recôncavo, or to the nearby town of Milagres.

Politically, this influx of new workers has had little in-

VILA RECÔNCAVO

178
*565
·315
58 begun to live together. But it is a general policy of Petrobrás
that its employees establish regularized households and register
their children, as the benefits of social legislation and insurance
must be paid to legal beneficiaries, such as wives and
[745] children. Because of the many recent marriages, there are
no longer any houses available in Vila Recôncavo, nor in Milagres,
[362] and there has been a spurt of housebuilding.

There have also been some shifts in emphasis in the struc-
178 ture of the community. While the factory nucleus is no longer
621 the scene of social gathering for the upper class of the area,
*249 the structure of the factory-private plantation system ensures
that it continues to be the economic center as long as sugar
cane is being planted in the area. The system of quotas es-
[434] tablished for the private planter and the factory by the Insti-
tute of Sugar and Alcohol requires that planter and factory
[361] cooperate in supplying and receiving sugar cane. Also, the
physical structure of the area, in which the factory is the
[496] center of the network of a small railroad which reaches out
to each of the private properties, strengthens the impression
of the factory as the center of activities.

178 The possible future shift from sugar to cacao will of course
diminish the importance of the sugar factory. However, in
443 the meantime there is a new factor which will give more im-
[245] portance than ever to the factory: a feira, or market place.
The county of Vila Recôncavo does not have a weekly market.
*[249] For many years the county officials have wanted to establish
one, not only for increased municipal income, but also to
help attract more people to the area and to make life easier
for the population. A market place is now under construction
at the factory nucleus. When the market is completed, the
factory town will become at least a weekly center of attraction
for many people of the surrounding plantations.

178 The development of the petroleum industry is bringing new
315 life to the town of Vila Recôncavo, to the nearby town of Milagres,
and to the new city of Conselho. Petrobrás cannot
●[311] develop a nucleus on the land which belongs to the factory or
to the private owners, and therefore it must concentrate any
local community building efforts in the old public towns which
178 already exist. Petrobrás, indirectly, through the county court
315 of Vila Recôncavo, will soon contribute considerably to the
county income. The same sort of compensation which was
434 worked out in regard to the planters is now being arranged
651 for the county, through taxes on the finished products from
652
632

175

311

RACE RELATIONS IN A RURAL COMMUNITY OF THE BAHIAN RECÔNCAVO[1]

175

249

by

HARRY W. HUTCHINSON

[13]

[439]

I. In the seventeenth and early eighteenth centuries, a narrow strip along the north-eastern coast of Brazil in what are now the States of Pernambuco, Alagoas, Sergipe and Bahia, was the most important region of economic, political and social life in the whole colony. The rainfall along this portion of the coast is dependable and the extremely fertile soil, which was originally covered with thick forests, was ideally suited for sugar cane. By the seventeenth century, this region produced a large part of the world's sugar supply. Sugar, which was then a luxury in Europe, brought fabulous profits, and the north-eastern coast of Brazil became an exceedingly prosperous colony. [633] Large cities grew up along the coast; Salvador in Bahia and Recife in Pernambuco became the most important centres of colonial life, and Salvador was the capital of the colony from 1549 to 1763. [346] Both were cities of great wealth based on the booming sugar industry. The numerous churches built in Salvador during the period of opulence, with their elaborate gold-leafed wood carving and polychrome tile work, are witnesses to the tremendous wealth of the era.

175
249
567
565

It was the plantation system, the basis of this lucrative sugar industry, which gave this region many of its characteristic traditions and formed patterns of race relations which have persisted in a modified form into the present. Gilberto Freyre in his monumental *Casa Grande e Senzala*, and other Brazilian writers [1],[2] have described life on these sugar plantations. African slaves provided the manpower. More than three million Negroes were imported from Africa during the seventeenth, eighteenth and nineteenth centuries, and a large proportion came to the sugar plantations of north-eastern Brazil. [571] The Portuguese plantation owners became rich, and came to form a regional aristocracy with a luxurious and ostentatious way of life. The slaves and their masters, on these plantations, formed two distinct social groups, but it is distinctive of the region that their relations were intimate and warm; Freyre describes the intimacy between the *moleque* (Negro lad) and the master's son as playmates, between the master's wife and her domestic servants, between the Negro nurse and her white charges, and other close

[122]

---

[1] In addition to thanking those persons listed in the Introduction to this series of articles for their aid and co-operation in making this study possible, I wish to thank the Henry L. and Grace Doherty Charitable Foundation Inc. and the Department of Anthropology of Columbia University, whose grants of funds contributed largely to the possibility of this study. Also, to acknowledge with thanks the aid of Carmelita Junqueira Ayres and Elisa Amelia Ferreira for their assistance in the collection of the data.

[2] The figures in brackets refer to the bibliography on page 46.

175
249
567
565
571

ties between Negroes and whites on these colonial plantations. All writers have mentioned the frequency of sexual relations between the white plantation owners and their female slaves. Slavery was not a humane institution in Brazil or elsewhere, but in Brazil relations between the slave and the master were of a more personal nature than in other regions where slavery existed in the New World.

175
249
567
571
466.
178
565
[464]

By the middle of the last century, the West Indies and other regions of the world were competing with the Brazilian north-east for the world sugar market; and the abolition of slavery in 1888 caused difficulties of labour supply on these plantations. The sugar industry no longer provided the great wealth that it had in the past, and many of the old plantations were abandoned or sold to large commercial companies who installed modern equipment for large-scale sugar production. Plantation slaves became wage labourers, and the old traditional patterns of behaviour between the Negro slave and the white plantation-owning aristocrat began to disappear, to be replaced by an impersonal employee-employer relationship in keeping with the new way of life. Yet many patterns persist from the days of the old plantation system. Many of the descendants of the aristocratic plantation owners try to preserve the old traditions. They are proud of their family names, and large aristocratic families are still important in the economic and social life of the region. In many rural localities, there are still plantations where the relations between the workers and the owners are highly personalized, as they were in the past, and where customs and traditions formed during the period of opulence and slavery continue, if modified, by modern conditions. Throughout this part of Brazil, the relations between people of different racial groups have been influenced by the large proportion of Negroes in the population, by the importance of slavery in the relatively recent past, and by the particular form which the relations between the Negro slave and the European master took on the plantations.

121
361
175
249
[311]

II. The community with which the present article is concerned is called Vila Recôncavo; it is a real town situated in the zone known as the Recôncavo which surrounds Salvador, the capital of the State of Bahia, and which borders on the Bay of All Saints, extending inland from the shores of the bay some 30 miles on the northern side, and considerably less on the southern side. The Recôncavo was characteristic of the whole north-eastern plantation region. The Portuguese who settled in Salvador in 1549 recognized the value of these lands around the new city and the Bay of All Saints for sugar production. The third governor of Bahia, Mem de Sá (1557–74),

361
162 As one moves interior from the Reconcavo into the *sertão*, the Negro contribution to the population tends to decrease and the Indian contribution, much mixed with [311] [177] both white and Negro, to increase. Both on the moderately watered plateaus and river basins, chiefly devoted to cattle-raising and light farming and occasionally covered with virgin or second-growth timber, as well as in the sandy, dry, and hot *caatinga* country of the semiarid zones, one finds a frontier society which is relatively isolated and has been only slightly modified during recent decades by contact with the outside world.[8]

Thus, in this particular area of intimate racial and cultural contact where the Negro and his descendants have been fated to work out a rather picturesque career, one will find three distinct types of settlement and population. In the *sertão*, or interior, is a highly mixed stock to whose composition the Indian has contributed in greater proportion probably than either the Negro or the European. In the Reconcavo, with its tradition of a departed rural aristocracy, a disintegrated plantation system, and a long history of slavery, the population is still principally negroid. While in the city of Bahia itself the people are largely of mixed European-African origin, individuals of either pure European or pure African descent being clearly in the minority.

633
571 In the city also, the social order is still relatively stable. There has been in recent times little change. Bahia is, as we have seen, a comparatively old city, conscious of its traditions and proud of them. Conventions originally developed

---

[114] [8] Euclydes da Cunha's *Os Sertões* (12th ed.; Rio, 1933) gives a vivid and dramatic account of life on the *sertão*. Although written in 1902, it is still timely. R. B. Cunningham-Graham's *A Brazilian Mystic* (New York, 1925) is based upon this more detailed account.

BRAZIL SL1

B
BB
175
567
[527]
[311]
[671]
[428]

The two days in seven which according to custom the master allotted the slave for the cultivation of a plot of land[44] was as early as 1700 sanctioned in law.[45] His right in property could be transferred to his children.[46] He could

---

"a great deal depends upon the inclinations of the master, he will, however, be very careful in refusing to manumit, owing to the well-known opinion of every priest in favor of this regulation, to the feelings of the individuals of his own class in society, and to those of the lower orders of people; and likewise he will be afraid of losing his slave. He may escape with his money; and the master will then run much risk of never seeing him again, particularly if the individual is a creole slave. . . . . The master might indeed deprive the slave of the fruits of his labor, but this is never thought of; because the slave preserves his money in a secret place, or he has entrusted it to some person upon whom he can depend, and would suffer any punishment rather than disclose the spot in which his wealth lies concealed."

[44] "This day [Sunday] . . . . is the Negroes' own; after morning mass they are free to do their own will; and then most of them run to the hill to gather their coffee or maize, or prepare the ground for these or vegetables. They were just beginning to return from the wood, each with his . . . . basket laden with something of his own, something in which the master had no share; and again and again as they passed me, and displayed with glistening eye the little treasure, I blessed the Sabbath, the day of freedom to the slave" (Graham, *op. cit.*, p. 188).

[45] João Ribeiro, *Historia do Brasil* (3d rev. ed.; Rio, 1909), p. 255.

[46] However, if the slave died childless, his property reverted to the master. Note the following account given by Maria Graham regarding a slave on an estate in the province of Rio: "He was a mulatto boatman, the most trusty servant on the estate, and rich, because he is industrious enough to have earned a good deal of private property, besides doing his duty to his master. In his youth, and he is not now old, he had become attached to a creole woman, born, like him on the estate; but he did not marry her until he had earned money enough to purchase her, in order that their children, if they had any, might be born free. Since that time, he has become rich enough to purchase himself, even at the high price which such a slave might fetch; but his master will not sell him his freedom, his services being too valuable to lose, notwithstanding his promise to remain on the estate and work. Unfortunately, these people have no children; therefore on their death their property, now considerable, will revert to the master" (*op. cit.*, pp. 197-98).